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©  
*Welcome to*

THE SECOND ANNUAL

**European Software Engineering  
Process Group Conference 1997**



# EUROPEAN SEPG

## EVENT PLANNER

GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM

- Full Event Programme
- Conference Services
- Abstracts & Profiles of Presenters
- Exhibitor Advertisements
- Call for Participation European SEPG'98

**98-00023**



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ORIGIN

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Netherlands SPIN:  
SPIDER



We also acknowledge the sponsors of the UK SPIN exhibition stand:

NWS Bank plc  
Oxford Software Engineering Ltd  
British Computer Society



## REGISTRATION

19.00 - 20.00

08.00 - 17.30

08.00 - 19.00

08.00 - 14.00

## TUTORIALS AND CONFERENCE

09.00 - 10.30 Presentations

10.30 - 11.00 Break

11.00 - 12.30 Presentations

12.30 - 14.00 Lunch

14.00 - 15.30 Presentations

15.30 - 16.00 Break

16.00 - 17.30 Presentations

As above, however the conference will close at 17.00

## CONFERENCE BAR

A conference bar will be open each evening from 17.30 - 18.30 and on Thursday, 19th June from 17.00 - 18.00

## GALA EVENING

18.30 - LATE

## EXHIBITS & EVENING SESSIONS

08.00 - 18.30 Exhibits  
18.00 - 19.00 Presentations

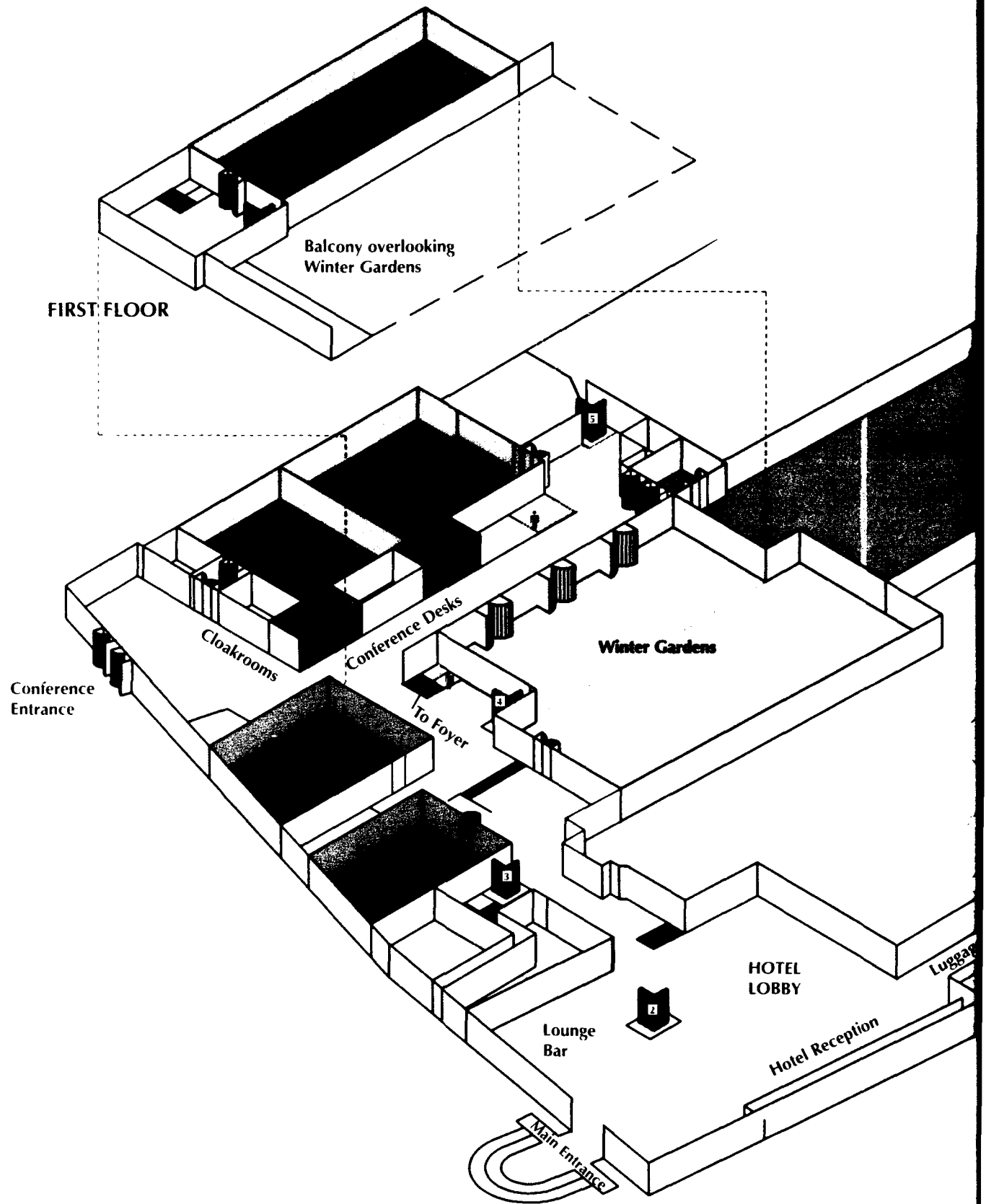
08.00 - 18.30 Exhibits  
18.00 - 20.00 Presentations

08.00 - 18.30 Exhibits

08.00 - 16.00 Exhibits  
17.00 CONFERENCE CLOSES

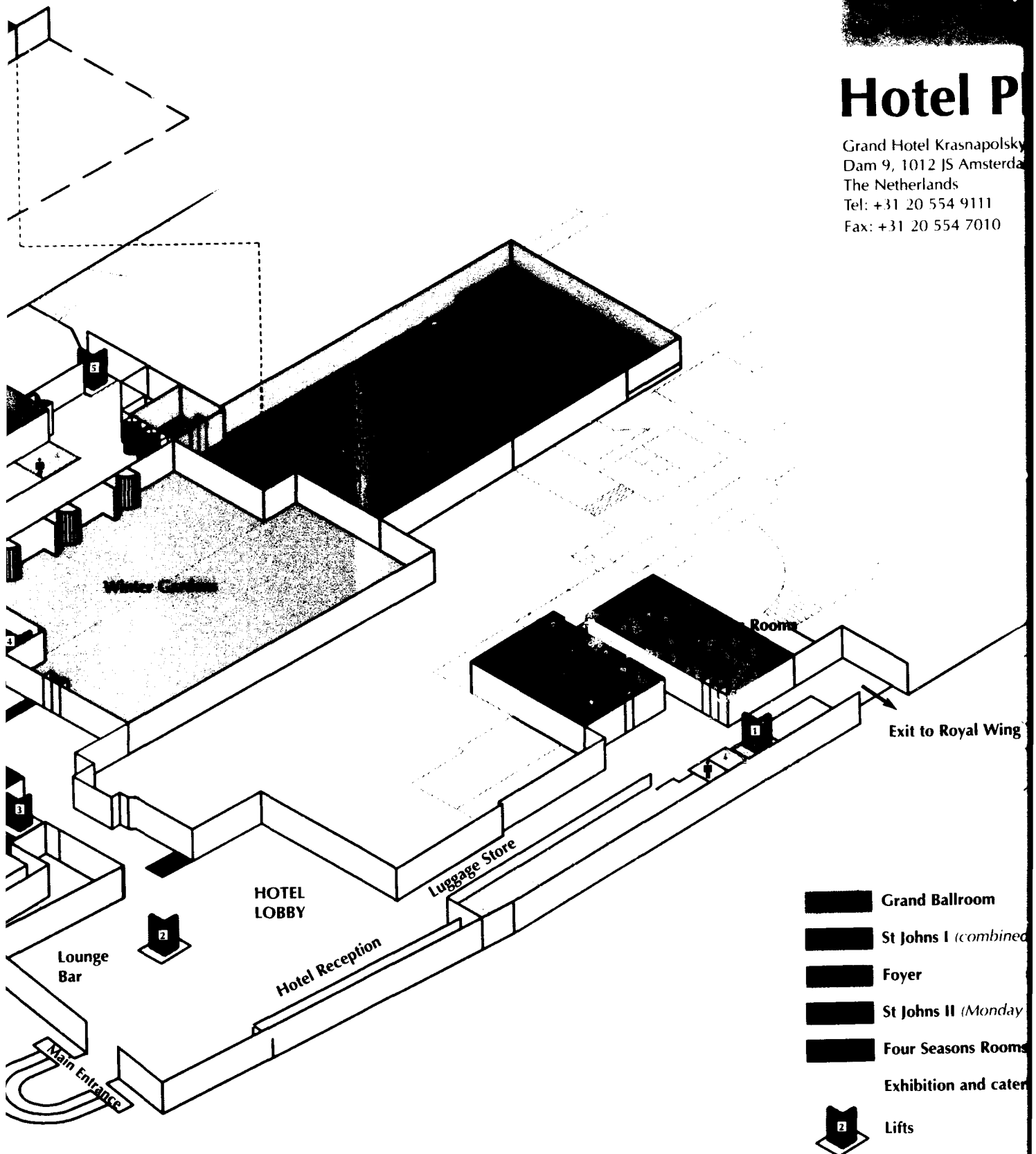
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# Hotel P

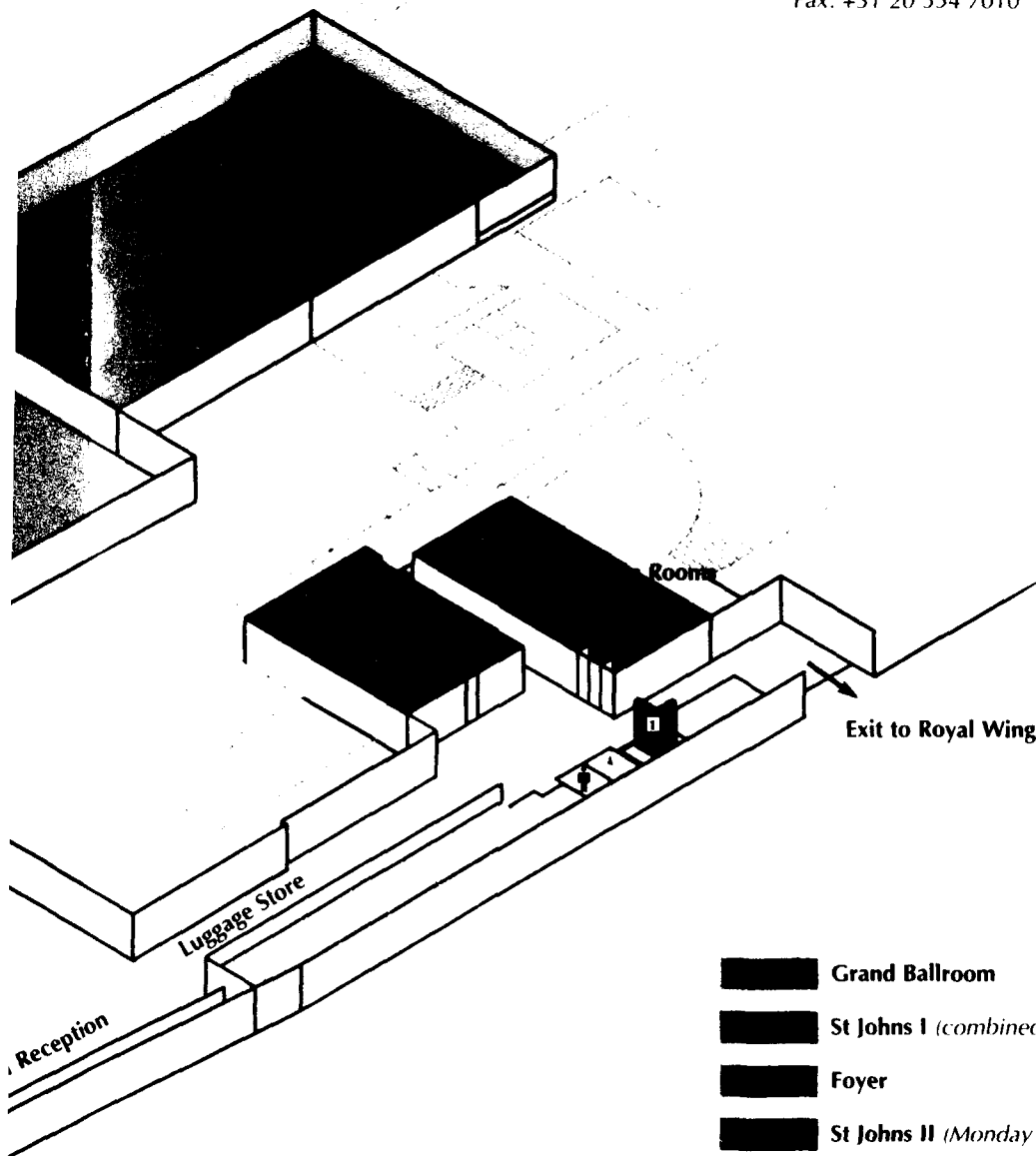
Grand Hotel Krasnapolsky  
Dam 9, 1012 JS Amsterdam  
The Netherlands  
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Fax: +31 20 554 7010

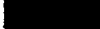
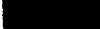
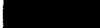
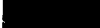
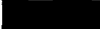






# Hotel Plan

Grand Hotel Krasnapolsky  
Dam 9, 1012 JS Amsterdam,  
The Netherlands  
Tel: +31 20 554 9111  
Fax: +31 20 554 7010



-  **Grand Ballroom**
-  **St Johns I** (*combined with St Johns II for conference*)
-  **Foyer**
-  **St Johns II** (*Monday and Tuesday only*)
-  **Four Seasons Rooms** (*Tuesday morning only*)
-  **Exhibition and catering in Winter Gardens**
-  **Lifts**

How to use this Planner .....	5
-------------------------------	---

#### CONFERENCE SERVICES

Printing Centre .....	6
CD-ROM Browsing Stations .....	6
News Desk .....	6
Gala Dinner .....	6
Conference Bar .....	6
Shipping .....	6

#### PROGRAMME

Monday .....	9
Tuesday .....	10
Wednesday .....	11
Thursday .....	12
Evening Sessions .....	13

<b>Critique Form</b> .....	<b>(Tear out)</b>
----------------------------	-------------------

#### PRESENTATIONS

##### Monday Morning

T101a Process and Year 2000: Complacency or Hype? .....	17
T101b Appraisals Using the CMM as a Reference Model .....	25
T101c IDEAL Approach to Implementing Software Process Improvement .....	27
T101d Peer Reviews: The Key to Cost-Effective Quality .....	29

##### Monday Afternoon

T102a The People Capability Maturity Model (P-CMM) - A Brief Introduction .....	31
T102b Dealing with the Underworld - Accelerating SPI .....	33
T102c Software Process Improvement: Business Impacts and Value .....	35
T102d Effective Implementation of CMM Levels 2 & 3 .....	37

##### Tuesday Morning

T201a Measurement Symposium (ALL DAY)	
T201a-1 Chair: Paul Goodman, TBL .....	39
T201a-2 KEYNOTE: Controlling Outsourced Software Contracts .....	41
T201a-3 Metrics in Small Companies - Coupling a Metrics Programme to Your Business Model .....	43
T201a-4 Quantitative Management of Software Process Improvement .....	45
T201a-5 Process Improvement by Software Measurement - Current and Future Directions for GQM Method .....	47
T201a-6 Software Metrics - Real World Experiences .....	49
T201a-7 The MIAMI Experience .....	51
T201a-8 Trends in Software Process Maturity .....	53
T201b Dependence to Influence: Developing and Nurturing Effective Sponsorship .....	55
T201c Risk Management in Practice: Effective and Ineffective .....	57



1201d	Personal Software Process .....	59
1201e	A Method for Defining and Improving Software Processes .....	61

#### **Tuesday Afternoon**

1202b	Blind Faith is Not the Answer - Establishing a Customer Focused Requirements Process that Consistently Delivers .....	63
1202c	Process Improvement Action Planning .....	65
1202d	Project Planning, Tracking and Configuration Management for Project Leaders .....	67

#### **Wednesday Morning**

C 300	Co-Chairs: Bill Peterson, SEE; Chris Earner, Lloyds TSB Group; and Hans Sassenburg, Netherlands SPIN (SPIden) .....	69
	How Competitive is the European Software Industry? .....	71
C 302	Professional Software Development in Europe - A Brief Assessment .....	73
	Models of SPI: Getting Beyond Case Studies .....	75
C 304a	Competence in Software and Engineering - Siemens' Software Initiatives .....	77
C 304b	Managing Culture Change .....	79
	Software Measurement Across a Global Enterprise .....	81
	Ethics and the Software Process .....	83

#### **Wednesday Afternoon**

C 306a	Setting up SPI in a Multi-Cultural and De-Centralised Engineering Company .....	85
C 306b	Capability Maturity Model for Software, Version 2.0 .....	87
C 306c	Using SPI Principles to Improve the Value of Legacy Systems .....	89
	Experiencing Software Process Improvement at the Sharp End .....	91
	Requirements for Winning Software Teams .....	93
	Challenges and Solutions for SPI in a Small Company .....	95
C 308a	PANEL: Approaches to Process Improvement Support .....	97
C 308b	SPICE and ISO/IEC 15504 .....	101
C 308c	Assessment and Optimization of System Architectures: Experiences with Industrial Applications at Siemens .....	103
	Understanding and Improving your Suppliers .....	105
	Implementing and Enhancing a Quality Management System using TQM Principles and the CMM as a Framework .....	107

#### **Thursday Morning**

C 402	SEI Process 2000: Building on Strength .....	109
	The Improvement Engine of the Ericsson Systems Software Initiative .....	111
C 404a	Software Process Improvement Journey from Level 1 to Level 5 .....	113
C 404b	Highlights and Report Back from The Measurement Symposium .....	115
	A Quarter Century of Software Process Improvement .....	117
	Continuous Quality Improvement in Software Development on the Basis of Measurement and Assessment .....	119

#### **Thursday Afternoon**

C 406a	Overcoming Resistance to Change to Become a True 'Learning Organisation' .....	121
C 406b	A Co-ordinated Approach to Identifying Software Development Risk in MoD Projects .....	123
C 406c	Five Years' Experience with SPI: Lessons Learnt .....	125
	From Chaos to Control .....	127
	The Complementary Aspects of Process Capability and Re-Use Capability .....	129
	Software Best Practice: Benefits to the Business .....	131
C 408a	CLOSING PANEL - Panellists .....	133



## EXHIBITORS

aimware	137
Continuous Software Corp. / QA Systems	139
European Software Institute	141
European Software Process Improvement Foundation	143
Guild of Independent Function Point Analysts	145
IBM Global Services	147
ICT-AUTOMATISERING B.V.	149
Institute for Software Process Improvement Inc.	151
james martin + co	153
Origin Quality Management Competence Center	155
Process Professional	157
Q-LABS	159
QSM Metric Consult	161
Software Engineering Institute	163
Software Process Improvement Network (UK)	165
Software Productivity Research	167
Survive! The Business Continuity Group	169
TBI	171
The Bootstrap Institute	173
<b>Call for Participation European SEPG'98</b>	175
<b>Index by Presenter</b>	179

## How to use this Planner

This Planner is designed to help you find your way around the European SEPG'97 conference and tailor the event to your requirements.

It contains:

- \* a short abstract for each tutorial and conference presentation
- \* profiles of the speakers
- \* a permanent reference point for the exhibitors with information on the services and products provided by them

## Presentation References

The presentation reference tells you when it is happening, and where: Tutorials are prefixed with 'T'; conference sessions prefixed with 'C'. The first digit of the number tells you which day it is on: 1=Monday; 2=Tuesday; 3=Wednesday; 4=Thursday. The second and third digits tell you which session, and the third which track.

T101c - Tutorial on Monday, session 1 (morning) track C

C407a - Conference presentation on Thursday, session 7 (14.45), track A

## Presentation Rooms

<b>TRACK A</b>	<b>Ballroom</b>
<b>TRACK B</b>	<b>St Johns I (combined with St Johns II for conference)</b>
<b>TRACK C</b>	<b>Foyer</b>
<b>TRACK D</b>	<b>St Johns II (Monday and Tuesday only)</b>
<b>TRACK E</b>	<b>Four Seasons Rooms (Tuesday morning only)</b>

### Printing and Copying Centre

Your handout materials include a copy of all presentation slides - if you would like a printed version of a specific conference paper, we will be pleased to provide these at the Printing Centre free of charge. Please note that all conference papers are contained in your CD-ROM.

### CD-ROM Accessing Stations

A number of CD-ROM readers will be available, including one on the ESPI Foundation exhibition stand.

### News Desk

Each morning you will receive a copy of the 'Conference Exchange' newsletter, which provides highlights and reports of events at the conference itself.

If you would like to make an announcement in the newsletter while you are at the conference, please speak to Sean Ellis at the News Desk.

### Gala Dinner

You are invited to attend the Gala Dinner on Wednesday evening. Cocktails will be served in the Winter Gardens from 6.30pm and dinner will be served in the Ballroom at 7.30pm. The evening will include live entertainment and the Prize Draw.

### Conference Bar

There will be a conference bar situated in the conference entrance of the hotel each evening, from 17.30 to 18.30.

### Shipping

We will provide a shipment service for your conference materials on Wednesday and Thursday. Please ask at the reception desk for details.

# Programme

**Monday - Tutorials & Year 2000 Panel**

**Tuesday- Tutorials & Measurement Symposium**

**Wednesday - Conference**

**Thursday - Conference**

**Evening Sessions**

# MONDAY

Tutorials & Year 2000 Panel

Registration:

SUNDAY 19.00 - 20.00  
MONDAY 08.00 - 17.30

## Registration

### Track A

#### BALLROOM

##### Process and Year 2000: Complacency or Hype?

Watts Humphrey, SEI  
Virginia Soper, IBM; & Peter  
Blundell, British Airways

### Track B

#### ST JOHNS I

##### Appraisals Using the CMM as a Reference Model

Steve Masters &  
Donna Dunaway, SEI

### Track C

#### FOYER

##### IDEAL Approach to Implementing Software Process Improvement

Chuck Myers, SEI, Paul  
Goodman, TBI & Magnus  
Ablgren, Q-Labs

### Track D

#### ST JOHNS II

##### Peer Reviews: The Key to Cost-Effective Quality

Fran O'Hara, F.G. O'Hara  
& Associates

## LUNCH

##### The People Capability Maturity Model (P-CMM) - A Brief Introduction

Bill Curtis, JeraQuest  
Metrics Inc

##### Dealing With the Underworld - Accelerating SPI

Mike Morrell, Wilko van  
Asseldonk & Jeroen  
Brinkman, Origin B.V.

##### Software Process Improvement: Business Impacts and Value

David Zubrow, SEI

##### Effective Implementation of CMM Levels 2 & 3

Magnus Ablgren and  
Christophe Debou, Q-Labs

## Bar and Exhibits

## EVENING SESSIONS (See page 13 for details)

# Process & Year 2000: Complacency or Hype?

## BALLROOM

**Welcome** - Chair: Christophe Debou, Q-Labs AB

**The Year 2000 and Process Improvement** - Watts Humphrey, SEI

**Performance or Panic?** - Virginia Soper, IBM Consulting Group

Break

**Driving and Focusing Year 2000 Projects** - Peter Blundell, British Airways

PANEL SESSION

### Registration

Track A BALLROOM	Track B ST JOHNS I	Track C FOYER	Track D ST JOHNS II	Track E FOUR SEASONS
MEASUREMENT SYMPOSIUM	<b>Dependence to Influence: Developing and Nurturing Effective Sponsorship</b> Chuck Myers, SEI	<b>Risk Management in Practice: Effective and Ineffective</b> Audrey E. Dorotee & Ray Williams, SEI	<b>Personal Software Process</b> Watts Humphrey, SEI	<b>A Method for Defining and Improving Software Processes</b> James D. Hart, SEI
	LUNCH			
	<b>Blind Faith is Not The Answer - Establishing a Customer Focused Requirements Process That Consistently Delivers</b> Mac Craggyle, Computa	<b>Process Improvement Action Planning</b> John Xu, The Boeing Company	<b>Project Planning, Tracking and Configuration Management for Project Leaders</b> Tim Kasse & Peter Eeason, ISPI	(No presentations)

### Bar and Exhibits

### EVENING SESSIONS (See page 13 for details)

## Measurement Symposium

### BALLROOM

**Welcome** - Chair: Paul Goodman, IBM

**KEYNOTE: Controlling Outsourced Software Contracts** - Charles Symons, Guild of Independent Function Point Analysts

**Metrics in Small Companies - Coupling a Metrics Programme to Your Business Model** - Tom Raaijmakers, ICI

Break

**Quantitative Management of Software Process Improvement** - Christof Ebert, Alcatel Telecom

**Process Improvement by Software Measurement - Current and Future Directions for QQM Method** - Rini van Solingen, Schlumberger RPS & Egon Berghout, Delft University of Technology

#### FOCUS REVIEW SESSION

*Facilitated groups will discuss the presentations which have taken place in respect to a specific subject area, e.g. People issues, Strategic issues, Implementation or Models. They will discuss experiences and identify questions which will be put to the speakers at the end of the panel session.*

LUNCH

**Software Metrics - Real World Experiences** - John Holt, Sun Life Assurance

**The MIAMI Experience** - Chris Herbert, Lloyd's TSB Group

**Trends in Software Process Maturity** - David Zubrow, SEI

Break

#### FOCUS REVIEW SESSION

**FEEDBACK - PANEL** All speakers will participate in the Panel Session, to field questions from the Focus Review Sessions

# WEDNESDAY Conference

Registration: 08.00 - 17.30

GALA DINNER: 18.30 - late

## Registration

### PLENARY SESSION - BALLROOM

**Welcome:** Hans Sassenburg, Netherlands SPIN, **Co-Chair:** Bill Peterson, SEI & Chris Earner, Hovds TSB Group

**How Competitive is the European Software Industry?**

*Jaap J. van Scheijen, Ministry of Economic Affairs, The Netherlands*

**Professional Software Development in Europe - A Brief Assessment**

*David Talbot, European Commission*

**Models of SPI: Getting Beyond Case Studies**

*Bill Curtis, TeraQuest Metrics Inc.*

#### Break

#### Keynotes Track A BALLROOM

**Competence in Software and Engineering - Siemens' Software Initiatives**

*Axel Volker & Gerd Wackerbarth, Siemens AG*

**Software Measurement Across a Global Enterprise**

*Gerry Pasternack, Citicorp & David Zubrow, SEI*

#### Keynotes Track B ST JOHNS ROOMS

**Managing Culture Change**

*Ken Taylor, Post Office IT SERVICES*

**Ethics and the Software Process**

*Michael Cavanagh, Balmoral Consulting*

#### LUNCH

#### Track A BALLROOM

**Setting up SPI in a Multi-Cultural and De-Centralised Engineering Company**

*Wimfred Menezes & Bernhard Eschermann, ABB Corporate Research*

**Experiencing Software Process Improvement at the Sharp End**

*Paul Hookham, Hovds TSB Group*

#### Track B ST JOHNS ROOMS

**Capability Maturity Model for Software, Version 2.0**

*Bill Peterson, SEI*

**Requirements for Winning Software Teams**

*Bill Curtis, TeraQuest Metrics Inc.*

#### Track C FOYER

**Using SPI Principles to Improve the Value of Legacy Systems**

*Ashley Travis, Bank of America*

**Challenges and Solutions for SPI in a Small Company**

*Romana Vajda Horvat & Ivan Rozman, University of Maribor*

#### Break

**PANEL: Approaches to Process Improvement Support**

**Moderator:**

*Lieuwe de Jong, Philips*

**Panellists:**

*Ellip A.L. Halsey, Alcatel*

*Keith Jackson, IBM*

*Tim Kasse, ISPI*

**SPICE and ISO/IEC 15504**

*Steve Masters, SEI & Bob Smith, European Software Institute*

**Understanding and Improving Your Suppliers**

*Mick Bennett & Chris Amos, British Telecom*

**Assessment and Optimization of System Architectures: Experiences with Industrial Applications at Siemens**

*Michael Gloger, Stefan Jockusch & Norbert Weber, Siemens AG*

**Implementing and Enhancing a Quality Management System using TQM Principles and the CMM as a Framework**

*Stefan Lütwyll, PanCredit Systems*

## Bar and Exhibits

## GALA EVENING

# THURSDAY Conference

Shipping:

OPEN 09.00 - 16.00

## PLENARY SESSION - BALLROOM

**Co-Chair:** Chris Earner, Hovds TSB Group & Bill Peterson, SEI

### **SEI Process 2000: Building on Strength**

Steve Cross, SEI

### **The Improvement Engine of the Ericsson Systems Software Initiative**

Jorma Moirén & Anders Wasterlid, Ericsson

**Break**

### **Keynotes Track A BALLROOM**

### **Keynotes Track B ST JOHNS ROOMS**

### **Software Process Improvement Journey From Level 1 to Level 5**

John Xu - The Boeing Company

### **Highlights and Report Back from the Measurement Symposium**

Paul Goodman, TBI

### **A Quarter Century of Software Process Improvement**

Ferry R. Snyder, Hughes Aircraft Company

### **Continuous Quality Improvement in Software Development on the Basis of Measurement and Assessment**

Holger Günther, Allianz Life

**LUNCH**

### **Track A BALLROOM**

### **Track B ST JOHNS ROOMS**

### **Track C FOYER**

### **Overcoming Resistance to Change to become a True 'Learning Organisation'**

Alistair Watters, Warwick Consulting Ltd

### **A Co-ordinated Approach to Identifying Software Development Risk in MoD Projects**

Hewelyn Jones, MoD & John Hamilton, DERA

### **Five Years' Experience with SPI: Lessons Learnt**

Gilles des Rochettes, Thomson-CSF

### **From Chaos to Control**

Debbie Hellmann & Alr Pilgrim, Digital

### **The Complementary Aspects of Process Capability and Re-Use Capability**

Sergio Bandinelli & Alvaro Sanz Monasterio, European Software Institute

### **Software Best Practice: Benefits to the Business**

Alejandro Moya, European Commission

**Break**

**PANEL** - Chaired by Colin Tully.

**Panellists:** Bill Peterson, SEI; Chris Earner, Hovds TSB Group; Hans-Jürgen Kugler, ESI; Keith Jackson, TBI; Alejandro Moya, European Commission; Hans Sassenburg, Netherland - SPIN (SPIDER)

**CLOSE - Complimentary Bar**

# Evening Sessions

Pre-scheduled evening sessions are described below, however please keep an eye on the notice boards for news of Birds of a Feather sessions and other activities.

## Monday

### European Commission ESSI Projects

#### Track C - Foyer

##### Multi-Company Approach to Assessment and Improvement

Jurgen Vanhoenacker, Bank Indosuez Luxembourg & Anne Hendrick, CRP Henri-Tudor

##### An Experiment for Use Cases in Capturing User Expectations in Software Development Projects

Franco Correrini, Sodalia S.p.A.

#### Track D - St Johns II

##### A SPIRITual Experience - SPI in Practice

Jaap A. Meeuse, Baan Company N.V.

##### Improving the Verification and Validation Process: Lessons Learned

Marc Morel-Chevillet, Objectif Technologie

Dear Delegate,

The ESSI sessions will describe the activities and results of a selection of projects funded by the EC. ESSI is the Software Best Practice action launched by the Commission in 1993, with the aim of improving the software development capability of European Enterprises in all industrial sectors.

Since 1993, the Commission has provided funding for 24 stand-alone assessments, 300 Process Improvement Experiments (formerly Application Experiments), 30 dissemination actions, 6 training and awareness actions and 6 experience/user networks. The summaries and results of all of these projects are to become available in the Software Best Practice Library, <http://www.esi.es/NASIE/>. ESSI is a first step towards a Europe-wide Software Best Practice culture.

During the European SEPG'97 conference, there will be a number of representatives from the European Commission participating in presentation sessions and the end of conference panel. We look forward to meeting you and answering any questions you may have about the Commission's Software Best Practice actions. Further information can also be obtained by email to: [essi@dg3.cec.be](mailto:essi@dg3.cec.be), or fax to: +32 2 29 68364.

Regards,  
Gisele Roeseams  
CEC, DGIII, F4 - (European Commission)

## Tuesday

### SME Debate

#### Track A - Ballroom

##### Is there a real case for Small to Medium-sized Enterprises (SMEs) to adopt software process improvement? What is an SME?

These questions will be addressed in a debate between representatives of the fictitious company 'HITco' (Hypothetical IT company) and a team of SPI specialists. The CEO and Financial Director of 'HITco' actually fulfil those roles in successful IT companies. The challenge will be to answer the real issues concerning the adoption of SPI for organisations like 'HITco'.

### European SPIN Meeting

#### Track A - Ballroom

Last year, the European SEPG hosted the first meeting of European SPINs, which met with great success.

This year, the conference will help to build a more proactive co-operation between SPINs around Europe, with the launch of 'EuroSPIN', a service which will help SPINs to become established and to communicate with each other. Once again, the Netherlands SPIN (SPIden) will be hosting the meeting and co-ordinating a range of working groups to take place during the four days of the European SEPG.



## Critique Form

Thank you for attending this conference. We would be grateful for your comments, which will help us to improve the service we provide. Please complete this evaluation form and hand it into the conference reception or post it into the 'critique form' box.

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Company: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

### Venue

Please let us know how you rate the services and facilities provided by the hotel:

Do you think that Amsterdam is a suitable venue for such an event?

Do you have any suggestions as to other suitable cities?

Did you find the administration service satisfactory?

Do you have any comments regarding the co-ordination and management of the event?

Do you have any further comments?

### Subject Area

Are there any subject areas that were not covered sufficiently?

### Format

We are keen that you get the most from the SEPG. Please give us your comments on the conference format and how you feel it could be improved:

### European SEPG '98

If you are interested in submitting a paper for the European SEPG '98, please provide subject area which you might cover and forward an abstract of 250-300 words as soon as possible.

☐ Presentation ☐ Tutorial

Working Title: \_\_\_\_\_

Would you be interested in exhibiting at the conference?

☐ Yes ☐ No

Thank you very much for your co-operation

## Tutorials

Please score presentations 1-5:

(1 = Poor, 2 = Average, 3 = Good, 4 = Very Good, 5 = Excellent)

### Monday 16th June

TRACK A	TRACK B	TRACK C	TRACK D
<b>T101a</b> <b>Process and Year 2000: Complacency or Hype?</b> <b>Watts Humphrey</b> <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>Virginia Soper</b> Presenter _____ Materials _____ Relevance _____ <b>Peter Blundell</b> Presenter _____ Materials _____ Relevance _____	<b>T101b</b> <b>Appraisals Using the CMM as a Reference Model</b> Steve Masters & Donna Dunaway <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>T102b</b> <b>Dealing with the Underworld - Accelerating SPI</b> Mike Morrell, Wilko van Asseldonk & Jeroen Brinkman <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____	<b>T101c</b> <b>IDEAL Approach to Implementing Software Process Improvement</b> Chuck Myers, Paul Goodman & Magnus Ahlgren <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>T102c</b> <b>Software Process Improvement: Business Impacts and Value</b> David Zubrow <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____	<b>T101d</b> <b>Peer Reviews: The Key to Cost-Effective Quality</b> Fran O'Hara <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>T102d</b> <b>Effective Implementation of CMM Levels 2 &amp; 3: Differences and Similarities</b> Magnus Ahlgren & Christophe Debois <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____
<b>T102a</b> <b>Overview of P-CMM</b> Bill Curtis <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____			

### Tuesday 17th June

TRACK A	TRACK B	TRACK C	TRACK D	TRACK E
<b>T201a</b> <b>Measurement Symposium</b> PLEASE SEE SEPARATE FORM <b>General comments:</b>	<b>T201b</b> <b>Dependence to Influence: Developing and Nurturing Effective Sponsorship</b> Chuck Myers <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>T202b</b> <b>Blind Faith is Not The Answer - Establishing a Customer Focused Requirements Process That Consistently Delivers</b> Mac Craigmyle <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____	<b>T201c</b> <b>Risk Management in Practice: Effective and Ineffective</b> Audrey J. Dorofee & Ray Williams <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>T202c</b> <b>Process Improvement Action Planning</b> John Vu <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____	<b>T201d</b> <b>Personal Software Process</b> Watts Humphrey <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____ <b>T202d</b> <b>Project Planning, Tracking &amp; Configuration Management</b> Tim Kasse & Peter Leeson <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____	<b>T201e</b> <b>A Method for Defining and Improving Software Processes</b> James D. Hart <b>Score: (1-5)</b> Presenter _____ Materials _____ Relevance _____

Wednesday 18th June

Please score presentations 1-5:

(1 = Poor, 2 = Average, 3 = Good, 4 = Very Good, 5 = Excellent)

OPENING SPEAKERS

**How Competitive is the European Software Industry?** Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_ (1-5)  
Jaap van Scheijen

**Professional Software Development in Europe** Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_ (1-5)  
David Talbot

**Models of SPI: Getting Beyond Case Studies** Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_ (1-5)  
Bill Curtis, TeraQuest Metrics Inc.

keynotes - TRACK A

keynote - TRACK B

**Competence in Software and Engineering - Siemens' Software Initiatives**  
Axel Völker & Gerd Wackerbarth

**Managing Culture Change**  
Ken Taylor

Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

**Software Measurement Across a Global Enterprise**  
Gerry Pasternack & David Zubrow

**Ethics and the Software Process**  
Michael Cavanagh

Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

TRACK A

TRACK B

TRACK C

**Setting up SPI in a Multi-Cultural and De-Centralised Engineering Company**  
Winnifred Menezes

**Capability Maturity Model for Software, Version 2.0**  
Bill Peterson

**Using SPI Principles to Improve the Value of Legacy Systems**  
Ashley Travis

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**Experiencing SPI at the Sharp End or 'Ouch!'**  
Paul Hookham

**Requirements for Winning Software Teams**  
Bill Curtis

**Challenges and Solutions for SPI in a Small Company**  
Romana Vajde Horvat & Ivan Rozman

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**PANEL: Approaches to Process Improvement Support**

**SPICE and ISO/IEC 15504**  
Steve Masters & Bob Smith

**Assessment and Optimisation of System Architectures: Experiences with Industrial Applications at Siemens**  
Michael Gloger

*Lieuwe de Jong*  
Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

*Phillip Halsey*  
Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**Understanding and Improving Your Suppliers**  
Mick Bennett & Chris Amos

**Implementing and Enhancing a Quality Management System using TQM Principles and the CMM as a Framework**  
Stefan Lytwyn

*Keith Jackson*  
Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

*Tim Kasse*  
Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**Thursday 19th June**

**Please score presentations 1-5:**

(1 = Poor, 2 = Average, 3 = Good, 4 = Very Good, 5 = Excellent)

**OPENING SPEAKERS**

**SEI Process 2000: Building on Strength**      Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_ (1-5)  
Steve Cross

**The Improvement Engine of the Ericsson  
Systems Software Initiative**      Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_ (1-5)  
Jorma Moberg & Anders Wasterlid

**Keynotes - TRACK A**

**SPI Journey from Level 1 to Level 5**  
John Vu  
Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

**A Quarter Century of Software Process Improvement**  
Terry R Snyder  
Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

**Keynotes - TRACK B**

**Highlights and Report Back from the Measurement Symposium**  
Paul Goodman  
Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

**Continuous Quality Improvement in Software Development on  
the Basis of Measurement and Assessment**  
Holger Günther  
Score: Presenter \_\_\_\_\_ Materials \_\_\_\_\_ Relevance \_\_\_\_\_

**TRACK A**

**Overcoming Resistance to Change to  
Become a True 'Learning Organisation'**  
Alistair Watters

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**From Chaos to Control**  
Debbie Hellmann & Alf Pilgrim

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**TRACK B**

**A Co-ordinated Approach to Identifying  
Software Development Risk in MoD  
Projects**  
Llewelyn Jones & John Hamilton

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**The Complementary Aspects of Process  
Capability and Re-Use Capability**  
Sergio Bandinelli & Alvaro Sanz

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**TRACK C**

**Five Years' Experience with SPI: Lessons  
Learnt**  
Gilles des Rochettes

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**Software Best Practice: Benefits to the  
Business**  
Alejandro Moya

Score: Presenter \_\_\_\_\_  
Materials \_\_\_\_\_  
Relevance \_\_\_\_\_

**PANEL**

**PANEL:** Chaired by Colin Tully  
Bill Peterson, Chris Larner, Hans Jürgen Kugler, Keith Jackson, Alejandro Moya, Hans Sassenburg

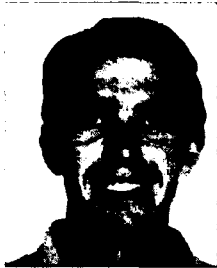
**Comments:**

# Presenters

**The following pages contain abstracts  
for each presentation together with  
profiles of the presenters**

## PROCESS AND YEAR 2000: COMPLACENCY OR HYPE?

### Chairman



**Christophe Debou**

Q-Labs

**With the millennium just around the corner, are we successfully dealing with the biggest combined task in the history of the software industry, or are the predictions of mass failure and disruption to be taken seriously?**

**This endemic problem is examined and placed in perspective by three leading authorities on Process and Year 2000.**

#### **Profile**

Christophe Debou has recently been appointed business area manager at Q-Labs GmbH (Kaiserslautern, Germany).

Prior to this, he was manager of software process and technology at the headquarters of Alcatel Network Systems (Zaventem, Belgium) from 1994 to 1997. He was coordinating software process improvement initiatives within the network systems section of Alcatel. His activities focused on organising software process assessment, supporting action plan definition, following up action plan implementation, and co-ordinating common actions across the several development centres.

Previously, Debou was a research group leader at Alcatel Austria Research Center (Vienna, Austria). He was the Alcatel project leader of the ESPRIT project ami (Application of Metrics Industry). He also participated in the industrial trial phase of the ESPRIT project COSMOS (Cost Management with Metrics of Specification).

He has published several articles in major conferences and journals in the area of metrics and quantitative approach to software process improvement. His main areas of investigations are software engineering, quantitative approaches to software project management, measurement, complexity metrics, data analysis, software process assessment and improvement, quality assurance. He is vice president of the ami user group and a member of the IEEE.

Debou holds an engineering degree in computer science from the École Nationale Supérieure de Sciences Appliquées et de Technologie, Lannion (France).

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**Q-Labs**



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## The Year 2000 and Process Improvement



**Watts Humphrey**  
SEI

### Abstract

The Year 2000 (Y2K) software defect is potentially the most serious software problem many organisations will ever face. While some organisations are well aware of this problem and have adequate preparations under way, many others do not. In this talk, Mr. Watts Humphrey discusses the Y2K problem, its causes, and its consequences. He also outlines the steps organisations should take to address this problem in a timely and effective way. His principal message is that software process improvement, the Capability Maturity Model (CMM<sup>SM</sup>), and the Personal Software Process (PSP<sup>SM</sup>) can significantly help organisations address this issue quickly and effectively.

While this talk will be of general interest, its principal focus is showing the relationship between process improvement and the actions required to address the Y2K problem. Mr. Humphrey walks through the steps of assessing Y2K exposure and implementing needed changes and shows how the CMM and PSP can help in doing this work. He concludes with recommendations to help organisations synchronize their process improvement work with their Y2K projects. He also gives references to some leading Y2K information sources.

### Profile


Mr. Humphrey is currently an SEI Fellow at the Software Engineering Institute (SEI) of Carnegie Mellon University. He joined the SEI after his retirement from IBM in 1986. While at the SEI, he established the Process Program, led the initial development of the Software Capability Maturity Model, and introduced the concepts of Software Process Assessment, Software Capability Evaluation, and most recently, the Personal Software Process (PSP)<sup>SM</sup>.

Prior to joining the SEI, he spent 27 years with IBM in various technical executive positions including the management of all IBM commercial software development. This included the first 19 releases of OS/360. Most recently, he was IBM's Director of Programming Quality and Process.

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Software Engineering Institute



Mr. Humphrey holds graduate degrees in Physics from the Illinois Institute of Technology and Business Administration from the University of Chicago. He is an SEI Fellow, a member of the ACM, an IEEE Fellow, and a past member of the Malcolm Baldrige National Quality Award Board of Examiners. He was awarded the American Institute of Aeronautics and Astronautics Software Engineering Award for 1993, and the SEI Leadership Award in 1997. His publications include many technical papers and six books. His most recent books are: Managing the Software Process (1989), A Discipline for Software Engineering (1995), Managing Technical People (1996), and Introduction to the Personal Software Process (1997). He holds five US patents.

SA1. The Capability Maturity Model, the CMM, and the Personal Software Process are Service Marks of Carnegie Mellon University.

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## Performance or Panic?



Virginia Soper  
IBM

### Abstract

Successful implementation of Year 2000 will be dependent on a complex range of factors. Knowing your organisation's readiness to change, the strengths and weaknesses of specific processes, and aligning IT and business strategies can position your effort for a positive result. Understanding the coordination, integration, and balance which must be achieved among methods, technology, skills, organisational structure, measurements, and company culture will be the difference between performance and panic.

### Profile

A business consultant with expertise in process improvement and assessments of application development (AD) and management processes, Virginia Soper has played key roles in the management as well as the technical aspects of critical software engineering projects. She specialises in working with clients to prepare them for impending technological, procedural, and cultural changes, forging partnerships that will help organisations flourish and remain competitive as technology advances. Her background of actuarial work in the insurance industry, combined with independent work and experience in a wide range of industries has given her a broad base in her 33 years of professional experience.

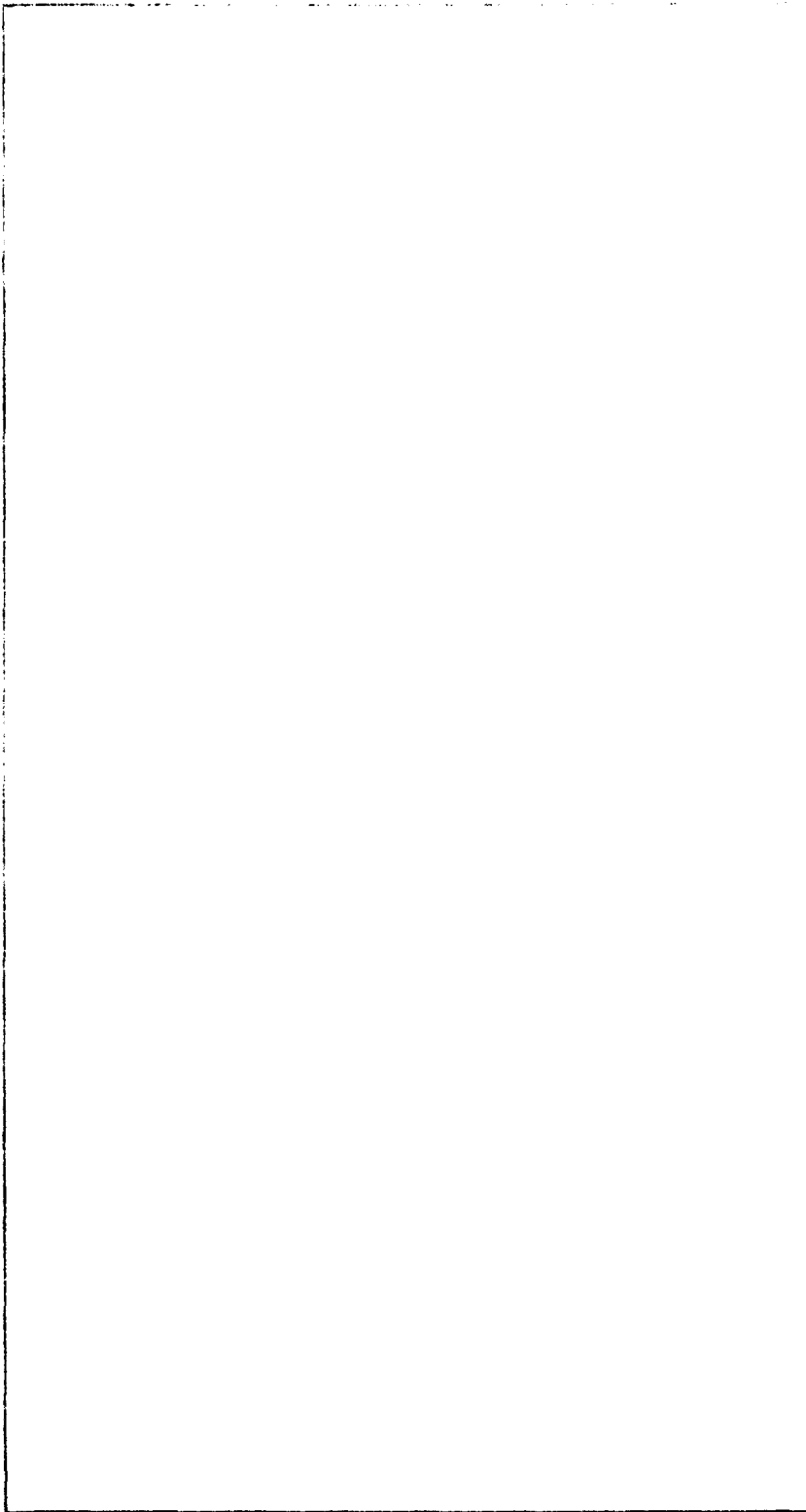
Currently, Ms. Soper is providing advice and counsel in a worldwide leadership role to improve clients' time to market, productivity, and to position their IT capabilities to meet the dynamics of a changing market place resulting from mergers, acquisitions, and regulatory issues. Her geographic responsibility and client involvement for the previous 5 years has been in Europe, including the operation of Europe's top software development study of Practices and Performances - a benchmark of AD organisations.

Ms. Soper jointly authored IBM's Application Development Effectiveness methodology and approach to process improvement, assessments, and transition planning. She developed Dynamic Stability Concepts for AD and has presented seminars on Quality and AD Effectiveness, The Process Improvement Process, Paradigm Shifts, Organisational and Cultural Aspects, and Change Dynamics.

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## Driving and Focusing Year 2000 Projects



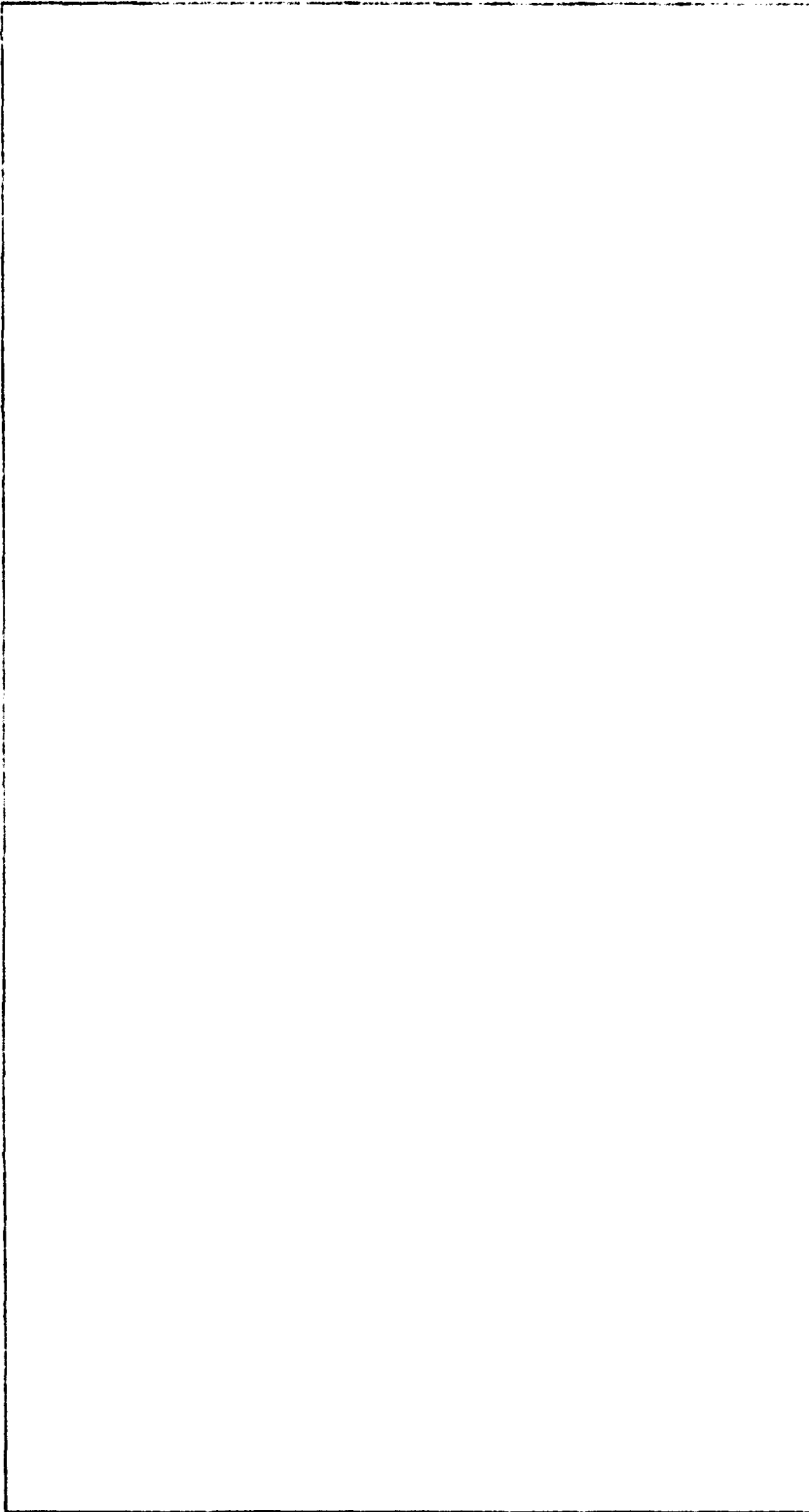
**Peter Blundell**  
British Airways

### Abstract

BA began its year 2000 project in 1995. We started by laying out the steps we needed to take to make sure our systems would still work in 2000 and beyond. Our first activities were to understand the issues, mount an awareness campaign and to identify any need for external assistance e.g tools or consultancy. We then moved into planning the work and portfolio construction which is now complete. Now we have changed and are changing those systems with the most urgent needs and are building our test systems infrastructure. BA is also working with the airlines trade association, IATA, to drive forward cross-industry issues such as non-IT supplier readiness.

### Profile

Peter Blundell has been working in Applications Development and Strategy for British Airways for 25 years. He has been the Year 2000 Programme Co-ordinator for BA since mid-1995. He is also Data Architecture Manager, responsible for all of BA's Data Strategy and Infrastructure. In the past he has been a Senior Project Manager for applications development for a range of different business areas. His senior management roles have been Infrastructure Development Manager, Data Management Development Manager and Data Design Group Manager. He holds a Masters degree in Mathematics from Oriel College, Oxford University.



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# Appraisals Using the CMM as a Reference Model



**Steve Masters**  
SEI



**Donna K. Dunaway**  
SEI

## Abstract

### *What you will learn:*

This high level overview of the CMM-Based Appraisals provides a brief history of SEI appraisal methods and establishes them in the context of the IDEAL approach to SPI. Detail on the most current assessment method, the CMM-Based Appraisal for Internal Process Improvement (CBA IPI), is given to help identify software improvements that are most beneficial given an organisation's business goals and current capability level.

### *Who should attend:*

Anyone interested in learning more about CMM-based assessments, or organisations already involved in CMM-based process improvement.

## Profile - Steve Masters


Steve Masters has been a Member of the Technical Staff in the Software Process Program since joining the SEI in 1987. He is currently a project member on the CMM-Based Software Process Improvement team. He authored "CMM Appraisal Framework (CAF), Version 1.0" (CMU/SEI-95-TR-001) and is currently working on updating the CAF for CMM Version 2. Masters co-authored the "CMM-Based Appraisal for Internal Process Improvement (CBA IPI): Method Description" (CMU/SEI-96-TR-007) and is one of the two primary instructors for Lead Assessor Training. Masters also co-authored the SEI technical report "An Analysis of SEI Software Process Assessment Results : 1987-1991" (CMU/SEI-92-TR-24). Masters has participated on numerous SEI assessments and is an authorised lead assessor. Masters' special interests are in software process improvement, software process assessments and the Personal Software Process (PSP).

Before joining the SEI, Masters was an independent consultant specialising in real-time systems for clients such as Defence Communications Agency, RCA Corporation, Bendix Corporation and HRB Singer. Masters' accomplishments include porting an Automatic Test Equipment (ATE) Test Executive Control System from one operating system to another, increasing the real-time responsiveness of a vendor supplied

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operating system, integration of a communications package for the transfer of real-time radar target data between two mini-computers, and the customising of an operating system to accept files generated by a different operating system.

Masters holds a B.S. Degree in Mathematics from Pennsylvania State University.

The SEI located in Pittsburgh, Pennsylvania, is a federally funded research and development centre operated by the Carnegie Mellon University under contract to the U.S. Department of Defense. The objective of the SEI is to provide leadership in software engineering and in the transition of new software engineering technology into practice.

#### **Profile - Donna K. Dunaway**

Donna K. Dunaway is a senior member of the technical staff in the Process Program, Software Engineering Institute, Carnegie Mellon University. She has the responsibility for the CMM-Based Appraisal for Internal Process Improvement (CBA IPI) and the development of CBA Lead Assessor Training. In addition to being an authorised Lead Assessor, she is a qualified instructor for CBA Lead Assessor Training and author of the Lead Assessor's Guide. She was the co-ordinator of the SEI Appraiser Program. She is a qualified instructor for the Introduction to the CMM course and Software Capability Evaluation Team Training. She has worked with a number of SEI clients in leading assessments and implementing their process improvement programs.

She was a member of the (US) SEPG 95, SEPG 96 and SEPG 97 Planning Committees and the SEI representative on the program and tutorial subcommittees. She holds the same positions for SEPG 98.

Before joining the SEI, Dr. Dunaway worked in several industrial software development organisations and applied research groups to support software engineering technologies. She has led software process improvement initiatives, software engineering research projects, software development projects, and professional development activities. She has worked in the development of knowledge-based systems. She has technical and managerial experience in software research and development with several U.S. Companies including Texas Instruments, The Analytic Sciences Corporation, Atlantic Richfield and her own consulting firm.

Dr. Dunaway holds a Bachelor Degree in mathematics from Texas Christian University; a Masters Degree in mathematics from Southern Methodist University and a PhD in systems engineering (computer science) from Southern Methodist University. She has taught graduate computer science courses at The University of Texas at Dallas and East Texas State University.

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# IDEAL<sup>SM</sup> Approach to Implementing Software Process Improvement



**Chuck Myers**  
SEI



**Paul Goodman**  
TBL



**Magnus Ahlgren**  
Q-Labs

## Abstract

### *What you will learn:*

The CMM for software provides an excellent framework for identifying an organisation's most critical and immediate software process challenges. The IDEAL model provides a structure for planning and executing the associated process improvement effort. This tutorial will help you understand IDEAL and apply it as an effective improvement approach.

### *Who should attend:*

Those with a formal SPI implementation role, an informal interest in starting up such an effort and external consultants.

## Profile - Chuck Myers

Dr. Chuck Myers is a Senior Member of the Technical Staff at the Software Engineering Institute (SEI), where he works within the Transition Enabling Program. Chuck received his BS degree from the United States Military Academy at West Point, NY, and his MS and PhD degrees from Indiana University. He served for eight years as a commissioned officer in the U.S. Army Signal Corps and worked with Grumman Aerospace Corporation for nine years. He has been at the SEI since 1987, where his primary work has been with organizations engaged in software process improvement (SPI) efforts. The focus of his work has been on organizational and human issues that enable achievement of technical SPI objectives. Chuck teaches both the Managing Technological Change course and the Consulting Skills Workshop offered by the SEI, and he is the lead for the Technology Adoption Architectures project.

## Profile - Paul Goodman

Paul Goodman is Technical Director of TOK B Limited (TBL), a management consultancy specialising in Software Process Improvement and Software Metrics. TBL is a founder member of the ESPI Foundation. Paul is the past Chairman of the UK Function Point Analysis User Group and a member of the ISO/IEC Functional Size Metrics Workgroup.

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**Q-Labs**





Paul frequently presents at international conferences, has published numerous articles and technical papers dealing with SPI issues and is the author of 'Practical Implementation of Software Metrics' published by McGraw Hill.

Paul's experience of Software Metrics came from the development and implementation of programmes at a large UK government site and a leading multi-national telecommunications supplier. Following this Paul moved into consultancy and has supported many organisations in the development and implementation of Software Metrics programmes in all areas of the IT industry.

Paul has participated in a number of European metrics initiatives including MUSE and METKIT.

Paul is also a member of the IDEAL project team. IDEAL is the SPI implementation model devised by the Software Engineering Institute, Pittsburgh.

#### **Profile - Magnus Ahlgren**

Magnus Ahlgren is responsible for the CMM-related services at Q-Labs. This includes developing and enhancing services, co-ordinating marketing efforts and taking an expert role in Q-Labs projects.

Magnus is 31 years of age, holds a Master of Science in Electrical Engineering from Lund's Institute of Technology and has been at Q-Labs since 1989. During the first years at Q-Labs he specialised in software metrics and establishing measurement programmes. Since 1992 he has been responsible for Q-Labs CMM related activities and his main project assignments are to assist organisations in organisation-wide improvement programmes.

Magnus has participated in Ericsson's corporate programme to gain leadership in Telecom Software (ESSI) since it started in 1993. He has had a key role in planning and initiating the CMM-part of the ESSI programme, including defining an Ericsson style assessment process, leading assessments and supporting design centres in their improvement efforts.

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# Peer Reviews: The Key to Cost-Effective Quality



**Fran O'Hara**

F.G. O'Hara  
& Associates

## Abstract

### *What you will learn:*

Recently published industry data collected from real projects shows that formal reviews/inspections have a return on investment of 10 - the highest of any structured method. This simple yet powerful process will be presented and two real world case studies will be used to describe the issues which impact the effectiveness of peer reviews in business.

### *Who should attend:*

Managers making SPI directional decisions, middle management who want to improve/introduce peer reviews as part of the overall process improvement plan and practitioners who want an insight into effectiveness issues relating to peer reviews.

## Profile

Fran O'Hara B.E. M.Sc. is a Software Quality and Process Improvement Consultant operating independently as F. G. O'Hara and Associates. His experience spans over ten years, working with Philips Research Laboratories (Netherlands) for five years, Telectronics Pacing Systems (Australia) for over four years and Q-Set (Ireland) for one year. Whilst at Telectronics, he managed the Implant Software Department responsible for the design, development and test of real-time embedded safety-critical software for cardiac defibrillators in an ISO 9001/CMM level 3 environment.

Fran is currently providing training and consultancy on all aspects of software process improvement to companies in Ireland and abroad. He was recently awarded the contract to provide SPI consultancy to Bord Gais in Ireland and is also a (sub)contractor on a number of EU funded projects.

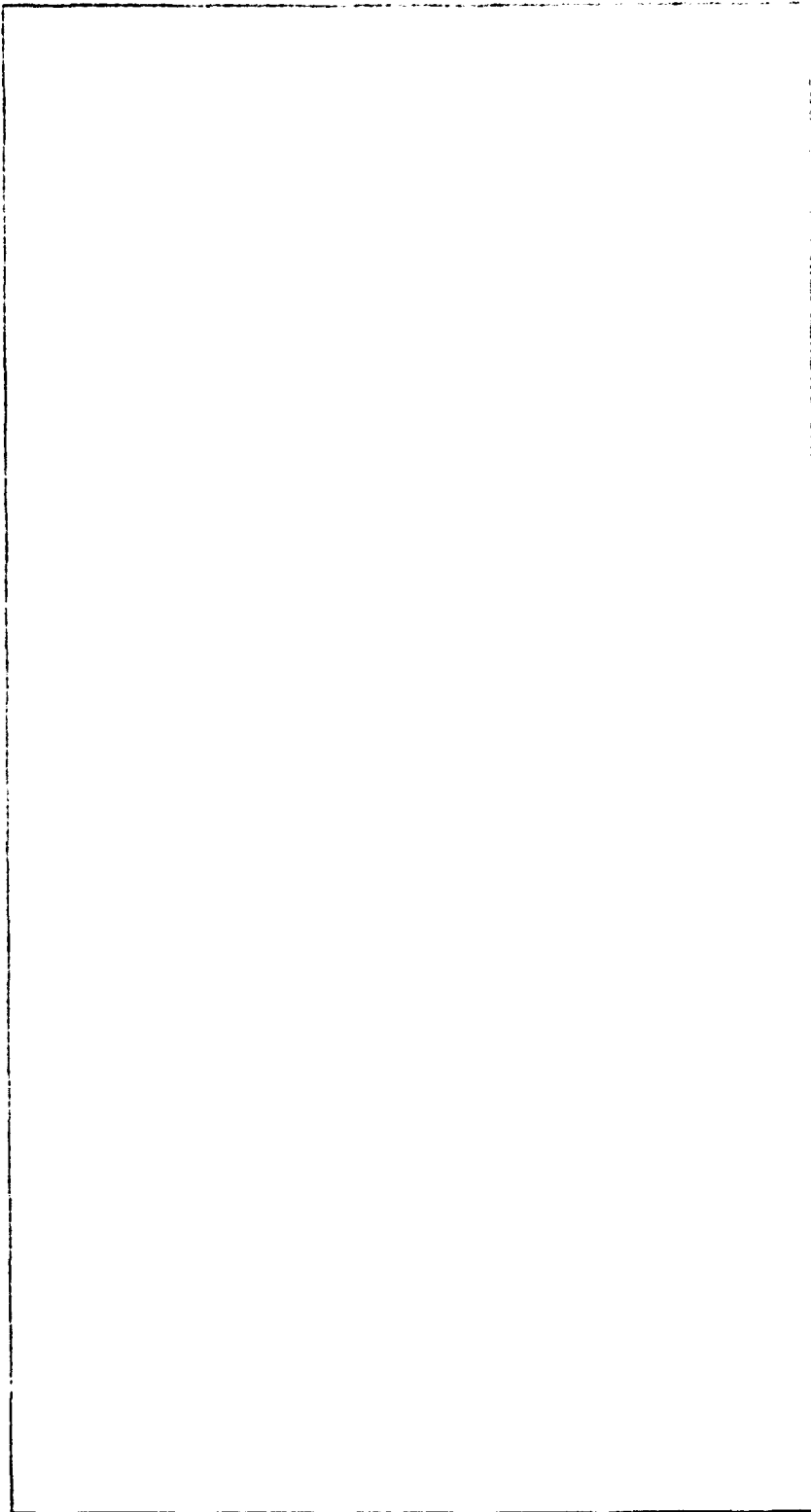
His areas of expertise in which he provides training and consultancy include Capability Maturity Model (SEI CMM), ISO 9001/TickIT, Software Project Management, Software Testing, Peer Reviews/Inspections and Requirements Management.

Fran is a trained TickIT auditor and a certified STEP (Systematic Test and Evaluation Process) testing methodology trainer.

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# The People Capability Maturity Model (P-CMM)

## A Brief Introduction



**Bill Curtis**

TeraQuest Metrics  
Inc.

### Abstract

#### *What you will learn:*

The People CMM was developed at the SEI to supplement the Software CMM by aiding software organisations in making substantial improvements in the capability of their workforce. This tutorial will describe the People CMM and how to apply it in improvement programmes. The People CMM focuses on areas such as the work environment, communication, staff planning, performance management, training, participatory culture and team building. Experiences from preliminary assessments will also be described.

#### *Who should attend:*

Those who manage or who plan to manage technical teams.

### Profile

Dr. Bill Curtis is Co-founder and Chief Scientist of TeraQuest Metrics in Austin, Texas where he works with organizations to increase their software development capability. He is a former Director of the Software Process Program in the Software Engineering Institute at Carnegie Mellon University. He led the project to produce the Capability Maturity Model from the process maturity framework developed by Watts Humphrey. He continues as a Visiting Scientist at the SEI where he is the principal architect and author of the People CMM.

Prior to joining the SEI, Dr. Curtis directed research on advanced computing technologies in the Software Technology Program and the Human Interface Laboratory at MCC, developed a worldwide software productivity and quality measurement system in ITT's Programming Technology Centre, experimentally evaluated software engineering methods in GE's Space Division, and taught statistics at the University of Washington. He is a co-author with Mark Paulk, Charles Weber, and Mary Beth Chrissis of the Addison-Wesley book, *The Capability Maturity Model: Guidelines for Improving the Software Process*, and has published over 100 technical articles in the areas of software engineering and management. He is on the editorial boards of 6 technical journals in software engineering and user interface technology, and is a frequent keynote speaker at software conferences.

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# Dealing with the Underworld - Accelerating SPI



**Mike Morrell**

Origin B.V.



**Wilko van Asseldonk**

Origin B.V.

## **Abstract**

### *What you will learn:*

Process models tell us what is happening (or not) in organisations. To find out why, so that improvements last, we have to go beyond the models and confront 'The Underworld' - the invisible level of an organisation governed by culture, management style, etc. The influence of 'The Underworld' in SPI is examined together with Change Management methods and tools that can be used to deal with it.

### *Who should attend:*

Those with limited practical experience in managing organisational change, but a conceptual understanding of change management issues is assumed.

## **Profile - Mike Morrell**

Mike Morrell is a Senior Consultant with Origin, one of the Philips group of companies that provides a wide range of IT services worldwide. He currently works for Origin's 'Quality Management Competence Center' which is based in Utrecht in The Netherlands. In this function, he provides consultancy services to Origin's clients on quality management issues and, in particular, on managing (Software) Process Improvement projects. Mike is an experienced assessor using the ISO 9000, CMM and EFQM models.

In his consultancy work, he is concerned with those aspects of organisational change management that determine the success or failure of major software improvement projects. Based on this experience, Mike and his colleagues have adopted and continue to develop methods for putting 'change management' into practice.

Mike has personally led two process improvement projects and consulted to a third project, all of which resulted in ISO 9001 certification within the planned time-frame.

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**ORIGIN**

**Profile - Wilko van Asseldonk**

Wilko van Asseldonk has worked as a Software Process Improvement consultant for Origin since November 1996 in the consultancy group of the Service Practice "Technical Applications and Software Services".

Recently, van Asseldonk developed a new approach in accelerating improvement programmes which is currently being used in several improvement programmes running from the consultancy group of which he is a member.

He has extensive experience in executing assessments in software development organisations and in setting up and executing improvement programmes.

He is currently project leader and main consultant of two international improvement programmes. One of these programmes tries to improve the development process of seven sites spread over Europe, the United States, and the Far East. The emphasis is on commonality and multi-site software development. The other project involves two companies in Austria and Germany trying to improve their process capabilities in parallel using the newly developed accelerated SPI approach.

**Profile - Jeroen Brinkman**

Jeroen Brinkman is one of the key consultants of ORIGIN/Quality Management CC. He is the main architect of the IT Focus method and was one of the first to combine principles for change management with the improvement of software development processes.

He has over ten years experience as an IT consultant and has a track record in EDP auditing, Change Management and the improvement of IT organisations.

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# Software Process Improvement: Business Impacts and Value



**David Zubrow**  
SEI

## **Abstract**

### *What you will learn:*

You will learn about the growing body of evidence on the impacts of CMM-based software process improvement. Data on the global adoption of the CMM, perceptions of the efficacy of software process assessments and business-related impacts will be presented. Participants will have an opportunity to build and critique their own business cases for adopting the CMM.

### *Who should attend:*

Anyone interested in learning about the impacts of the CMM and especially champions of process improvement who must justify the adoption or retention of CMM-based software process improvement.


## **Profile**

David Zubrow is Team Leader for the Software Engineering Measurement and Analysis group within the SEI's Software Process Program. His areas of expertise include empirical research methods, data analysis, and data management. Since his arrival at the SEI in 1992, Dave has been a lead developer of the latest Software Process Maturity Questionnaire, part of the development team for the Interim Profile appraisal method, and manager of the SEI Process Appraisal Information System. He recently co-authored technical reports entitled "Software Process Automation: Experiences from the Trenches," "Moving on Up: Data and Experiences doing CMM-based Software Process Improvement" and "Benefits of CMM-Based Software Process Improvement: Initial Results."

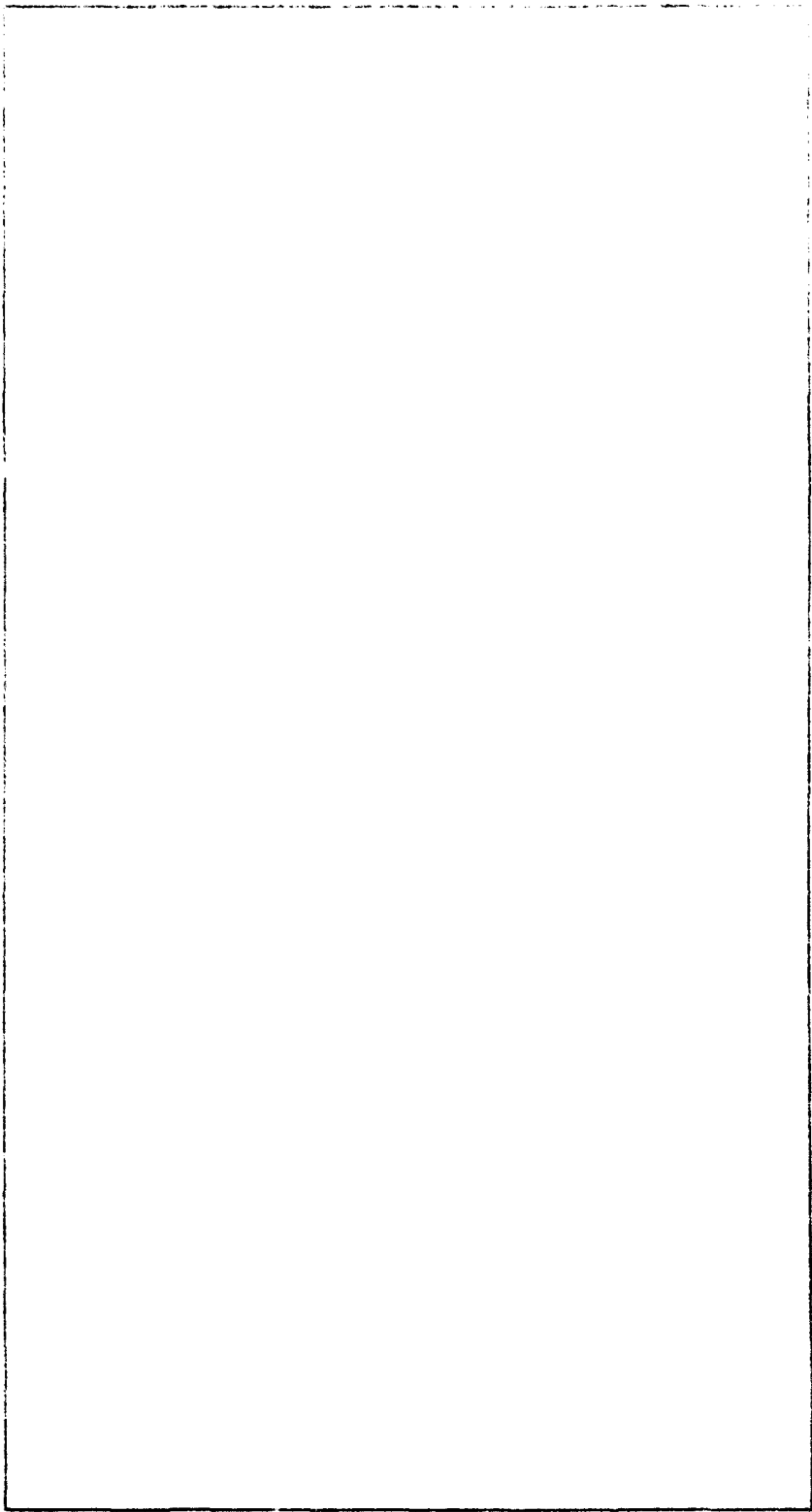
Dave is an SEI-authorized Lead Assessor and recently became one of the first Software Quality Engineers certified by the American Society for Quality Control. Prior to joining the SEI, Dave was Assistant Director of Analytic Studies for Carnegie Mellon University where he earned his PhD and MS degrees.

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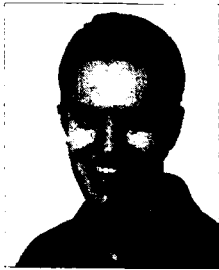
 Carnegie Mellon University  
Software Engineering Institute





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# Effective Implementation of CMM Levels 2 & 3



**Magnus Ahlgren**  
Q-Labs AB



**Christophe Debou**  
Q-Labs GmbH

## Abstract

### *What you will learn:*

While there are several characteristics common to both Levels 2 and 3 in the CMM, it is clear that the approach when implementing the improvement differs greatly. It is essential that the prerequisites and drivers for making the implementation effective are understood. These differences are examined in detail and concrete recommendations are given for success at both levels.

### *Who should attend:*

Anybody interested or involved in CMM-based process improvement, e.g. senior managers, software managers, project leaders, SEPG leaders, software engineers and improvement champions.

## Profile - Magnus Ahlgren

Magnus Ahlgren is responsible for the CMM-related services at Q-Labs. This includes developing and enhancing services, co-ordinating marketing efforts and taking an expert role in Q-Labs projects.

Magnus is 31 years of age, holds a Master of Science in Electrical Engineering from Lund's Institute of Technology and has been at Q-Labs since 1989. During the first years at Q-Labs he specialised in software metrics and establishing measurement programmes. Since 1992 he has been responsible for Q-Labs CMM related activities and his main project assignments are to assist organisations in organisation-wide improvement programmes.

Magnus has participated in Ericsson's corporate programme to gain leadership in Telecom Software (ESSI) since it started in 1993. He has had a key role in planning and initiating the CMM-part of the ESSI programme, including defining an Ericsson style assessment process, leading assessments and supporting design centres in their improvement efforts.

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**Q-Labs**

**Profile - Christophe Debou**

Christophe Debou has recently been appointed business area manager at Q-Labs GmbH (Kaiserslautern, Germany).

Prior to this, he was manager of software process and technology at the headquarters of Alcatel Network Systems (Zaventem, Belgium) from 1994 to 1997. He was coordinating software process improvement initiatives within the network systems section of Alcatel. His activities focused on organising software process assessment, supporting action plan definition, following up action plan implementation, and co-ordinating common actions across the several development centres.

Previously, Debou was a research group leader at Alcatel Austria Research Center (Vienna, Austria). He was the Alcatel project leader of the ESPRIT project ami (Application of Metrics Industry). He also participated in the industrial trial phase of the ESPRIT project COSMOS (Cost Management with Metrics of Specification).

He has published several articles in major conferences and journals in the area of metrics and quantitative approach to software process improvement. His main areas of investigations are software engineering, quantitative approaches to software project management, measurement, complexity metrics, data analysis, software process assessment and improvement, quality assurance. He is vice president of the ami user group and a member of the IEEE.

Debou holds an engineering degree in computer science from the École Nationale Supérieure de Sciences Appliquées et de Technologie, Lannion (France).

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## MEASUREMENT SYMPOSIUM

### Chairman



Paul Goodman  
TBL

**This intensive, full-day Symposium will bring you up to date on current best practice in the field of metrics. It features leading European experts and organisations that have succeeded in implementing powerful metrics programmes. Focus Review Sessions provide an opportunity to relate the presentations to your own experiences.**

**You will not find esoteric measurement models being discussed, but you will hear pragmatic solutions to practical problems coupled with the realisation that, sometimes, management needs are for swift answers rather than theoretically precise solutions.**

#### Profile

Paul Goodman is Technical Director of TOK B Limited (TBL), a management consultancy specialising in Software Process Improvement and Software Metrics. TBL is a founder member of the ESPI Foundation. Paul is the past Chairman of the UK Function Point Analysis User Group and a member of the ISO/IEC Functional Size Metrics Workgroup. Paul frequently presents at international conferences, has published numerous articles and technical papers dealing with SPI issues and is the author of 'Practical Implementation of Software Metrics' published by McGraw Hill.

Paul's experience of Software Metrics came from the development and implementation of programmes at a large UK government site and a leading multi-national telecommunications supplier. Following this Paul moved into consultancy and has supported many organisations in the development and implementation of Software Metrics programmes in all areas of the IT industry. Paul has participated in a number of European metrics initiatives including MUSE and METKIT.

Paul is also a member of the IDEAL project team. IDEAL is the SPI implementation model devised by the Software Engineering Institute, Pittsburgh.

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AMSTERDAM 16-19TH JUNE 1997





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## MEASUREMENT SYMPOSIUM

# KEYNOTE: Controlling Outsourced Software Contracts



**Charles Symons**

Guild of  
Independent  
Function Points  
Analysts

### Abstract

The dramatic increase in outsourcing of business application development and maintenance services leads to the question of how can clients effectively manage such contracts to meet their objectives, such as improving value for money. Measurements which may sometimes have been used internally to help with process improvement now need to be taken very seriously to help manage a successful partnership between the client and his outsourcing supplier.

### Profile

Previously a Partner with KPMG Management Consultancy (incorporating Nolan Norton & Co) and with over 35 years world wide experience in the Information Systems industry, Charles is now a Director of the Guild of Independent Function Points Analysts (GIFPA) Ltd. GIFPA is a consultancy specialising in assisting organisations with performance measurement and estimating in the field of software development.

*In this area, Charles is perhaps best known as the originator of Mark II Function Point Analysis (the UK Government standard for software sizing). Charles is also the UK (British Standards Organisation) representative to the ISO/IEC Workgroup looking at standards for functional sizing metrics, he is regularly invited to speak at international conferences and is the author of INSERT BOOK TITLE and PUBLISHER.*

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AMSTERDAM 16-19TH JUNE 1997

**GIFPA**



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MEASUREMENT SYMPOSIUM

## Metrics in Small Companies - Coupling a Metrics Programme to Your Business Model



**Tom Raaijmakers**  
ICT Automatisering

### Abstract

The Value System of Porter expresses the value of a service or product, in terms of Customer perception of Quality and features being valued. This value system is associated with the Company mission, vision and goals. Priorities are set, based on market position or other competitive issues. The final selection of areas of attention will enter a Metrics programme which transforms them into a measurable set of data. A connection of a Metrics programme (fi GQM) to the Customer's perception of value has been established.

### Profile

Tom Raaijmakers is a senior consultant at ICT Automatisering in the Netherlands. He has more than 18 years of experience as a software engineer and project manager; he is currently leading the SPI competence centre of ICT. Tom is an authorised assessor and, as a change manager, he coaches people in the application of improvement programmes. He received his BS in electrical engineering at the Hogeschool of West Brabant, Breda, The Netherlands. He is a member of the IEEE and the Dutch SPI Network SPIder. Tom is a graduate part-time teacher and drama director in theatre-acting.

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**ICT**  
NIEUWE WEGEN IN  
AUTOMATISERING





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MEASUREMENT SYMPOSIUM

# Quantitative Management of Software Process Improvement



**Christof Ebert**  
Alcatel Telecom

## Abstract

Collecting and analysing metrics is critical to objectively identifying and quantifying process improvements. Progress metrics are particularly relevant for having insight into projects and at the same time into process improvements. Software project managers periodically report a specific suite of well-defined metrics related to the respective phase of the life-cycle phase. Such metrics are used in projects for planning and tracking. They are one instrument of a homogeneous and continuous project and process management.

This presentation demonstrates typical metrics used for project and process tracking and how they can be used to build a history database to improve estimation. It will also look at the experiences of Alcatel in setting up a division-wide metrics programme.

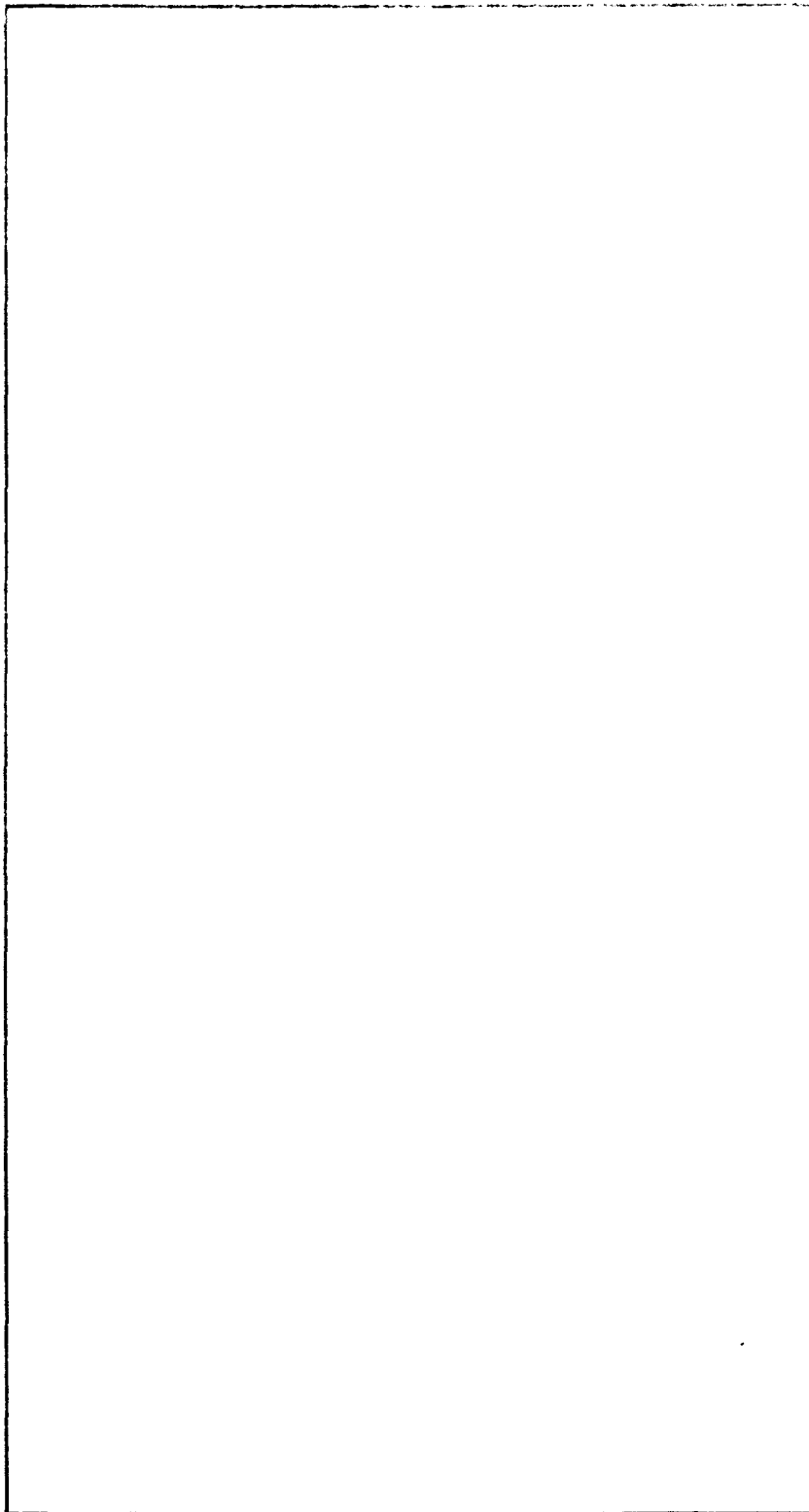
## Profile

Christof Ebert received a Master's degree in Electrical Engineering from the University of Stuttgart, Germany in 1990. In 1994 he received a Ph.D. with honours from the University of Stuttgart in Electrical Engineering on a software engineering related topic. Since 1994, Dr Ebert has been with Alcatel Telecom. He is currently Software Engineering Process Group Leader of Alcatel Telecom's Switching Systems Division in Antwerp, Belgium. He co-ordinates the software metrics programme of Alcatel Telecom's Switching Systems Division. He has published over forty refereed papers in the area of software metrics, software quality assurance, real-time software development and CASE support for such activities. His current research topics include software metrics, software process analysis and improvement, and requirements engineering. Dr Ebert serves on the editorial board of IEEE Software and on programme committees of software conferences. He co-authored "Software Metrics in Industry" published by Springer, Germany in 1996. He is a member of the IEEE, GI, VDI and the Alpha Lambda Delta honor society.

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**ALCATEL**  
NETWORK SYSTEMS



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# Process Improvement by Software Measurement - Current and Future Directions for GQM Method



**Rini van Solingen**  
Schlumberger RPS



**Egon Berghout**  
Delft University of  
Technology

## Abstract

Software measurement is an important aid to Software Process improvement. Most popular is the Goal Question Metric approach (GQM). This presentation introduces important techniques of GQM. By applying these techniques it is possible to start measurement (in practice) right away.

## Profile - Rini van Solingen

Rini van Solingen received his M.Sc. in Technical Informatics from Delft University of Technology in 1995. During his graduation he participated in the ESSI/CEMP project for Schlumberger RPS. This project focused on enhancing the GQM paradigm into a practical method. His participation included establishing a goal-oriented measurement programme at Schlumberger RPS. He continued his work at Schlumberger RPS, as a quality engineer. In parallel he is employed by the Information and Technology group of the Business Management section, at Eindhoven University of Technology. Within his current job he is responsible for the software measurement projects in Schlumberger RPS. He is also advising several software measurement projects in other industrial organisations.

Rini presented the Schlumberger RPS measurement experiences at last years E-SEPG in Amsterdam. The audience at the measurement symposium elected his presentation as being most relevant.

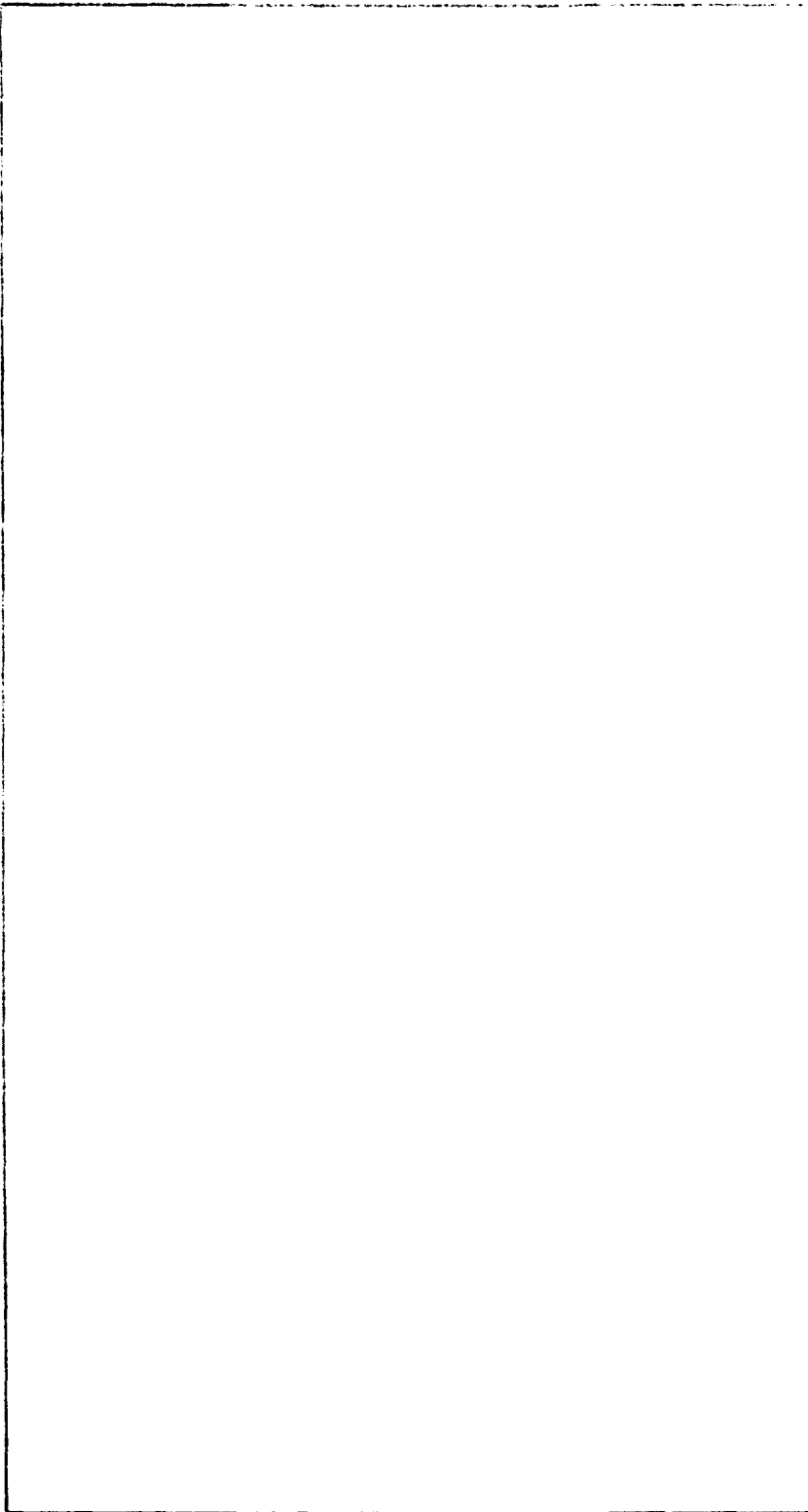
## Profile - Egon Berghout

Egon Berghout is assistant professor of Information Management at Delft University of Technology. He has been involved with software measurement for several years, especially through involvement in the Schlumberger RPS measurement programmes. His research focuses on efficiency and effectiveness problems regarding information system development.

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MEASUREMENT SYMPOSIUM

## Software Metrics - Real World Experiences



**John Holt**

Sun Life Assurance

### Abstract

The mechanics of Function Points counting have received some attention over past conferences. Also, to some extent, has the mechanics of starting a metrics area. However, the area that most presenters tend to skirt around is the political one. This presentation will spotlight some of the typical political battles that have to be fought to establish a metrics area and the solutions that were found. These will be drawn exclusively from the experiences of the metrics team at Sun Life Assurance.

### Profile

John is employed as a software metrics analyst at Sun Life Assurance, part of the AXA-UAP group of companies.

John has been active in software metrics for the last 10 years. He began his involvement in one of the major Australian banks, where he started the software metrics function.

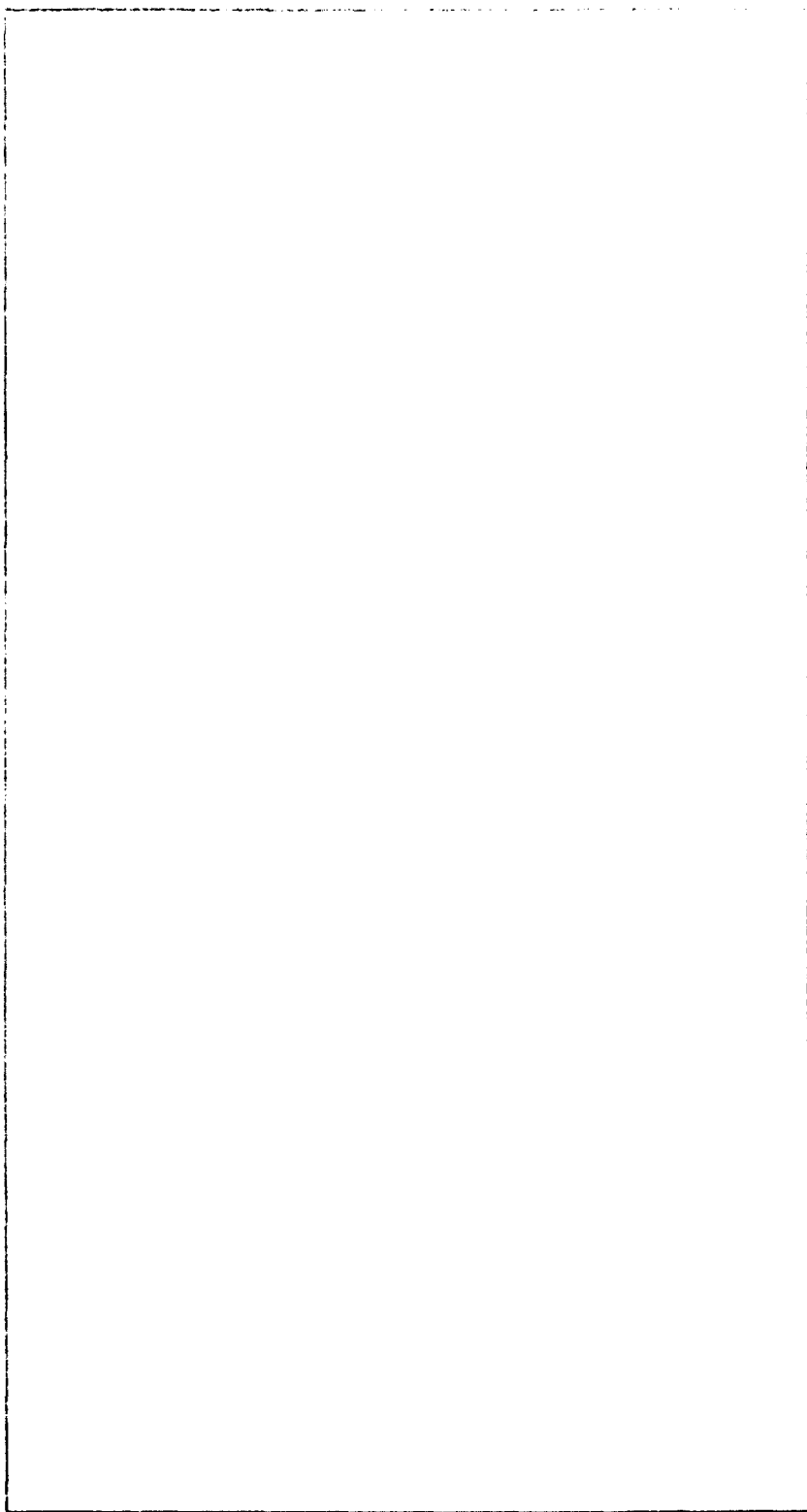
He was an inaugural member of ASMA, the Australian Software Metrics Association, and served on the executive committee. John was also instrumental in helping define the standards for the International Software Benchmarking initiative, now in place worldwide.

Currently, in addition to his metrics function within Sun Life, John is an active member of the UK Software Metrics Association, with a position on their executive committee.

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**SUN LIFE**



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## MEASUREMENT SYMPOSIUM

# The MIAMI Experience



**Chris Herbert**

Lloyds TSB Group

### Abstract

MIAMI is the Lloyds Bank (now Lloyds TSB Group) Software Metrics programme. The ethos of the programme is, measurement must involve all stakeholders and lead to meaningful improvement if it is to succeed.

The MIAMI experience provides evidence to support this ethos. This presentation aims to share the experience of successfully developing and implementing the Lloyds TSB metrics programme by:

- demonstrating the benefits of a strategic, top-down approach which addresses the management of commitment and organisational change; coupled with a tactical, bottom-up approach to resolve the operational issues that arise on a daily basis, such as the acquisition of expertise and the development of people,
- relating how MIAMI actively sought to learn from the experiences of other organisations, and those of itself into opportunities for improvement,
- illustrating an integrated technical architecture to realise the benefits of a metrics programme throughout the Lloyds TSB Group,
- identifying the challenges ahead in expanding a metrics programme across two merging organisations of differing cultures.

The MIAMI programme is seen to be successful, particularly in the way it contributes to continuous process improvement. How this was achieved is the true story of the MIAMI experience.

### Profile

Chris Herbert is the MIAMI Project Manager, heading a team of six. Chris is also responsible for the Estimating function. He has held this post since the start of the MIAMI project in July 1995.

Chris has over 18 years IT experience. After 9 years with Barclays Bank, Chris joined Lloyds Bank in 1988. After working as a Project Manager, Chris became Quality Manager for Systems & Support, a

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combination of IT and Head Office functions containing some 2500 persons. His responsibilities included training in quality management/ TQM techniques, target setting and measurement. Chris developed and introduced a strategy based around the Business Excellence/EFQM model to track progress against the business plan. Chris is a member of the UK Software Metrics Association Management Committee.

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## MEASUREMENT SYMPOSIUM

# Trends in Software Process Maturity



**David Zubrow**  
SEI

### Abstract

Since the late 1980s when the Software Engineering Institute (SEI) developed a framework for assessing the software process maturity of software organisations, it has been collecting data to track trends in software process maturity in the software community.

This presentation will discuss the most recent Community Maturity Profile, which is published by the SEI twice each year. The profile contains an interesting variety of charts and graphs depicting summarised information extracted from software process assessment results.


### Profile

David Zubrow is Team Leader for the Software Engineering Measurement and Analysis group within the SEI's Software Process Program. His areas of expertise include empirical research methods, data analysis, and data management. Since his arrival at the SEI in 1992, Dave has been a lead developer of the latest Software Process Maturity Questionnaire, part of the development team for the Interim Profile appraisal method, and manager of the SEI Process Appraisal Information System. He recently co-authored technical reports entitled "Software Process Automation: Experiences from the Trenches," "Moving on Up: Data and Experiences doing CMM-based Software Process Improvement" and "Benefits of CMM-Based Software Process Improvement: Initial Results."

Dave is an SEI-authorized Lead Assessor and recently became one of the first Software Quality Engineers certified by the American Society for Quality Control. Prior to joining the SEI, Dave was Assistant Director of Analytic Studies for Carnegie Mellon University where he earned his PhD and MS degrees.

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# Dependence to Influence: Developing and Nurturing Effective Sponsorship



**Chuck Myers**  
SEI

## **Abstract**

### *What you will learn:*

The focus of this tutorial is on what is perhaps the most important and difficult activity: getting and leveraging your management's support. This tutorial will help you understand the nature of your relationship with sponsors, and develop strategies for building and maintaining effective sponsorship in your back-home work situation.

### *Who should attend:*


Those with a formal implementation role or an informal interest in starting up a SPI effort and external consultants.

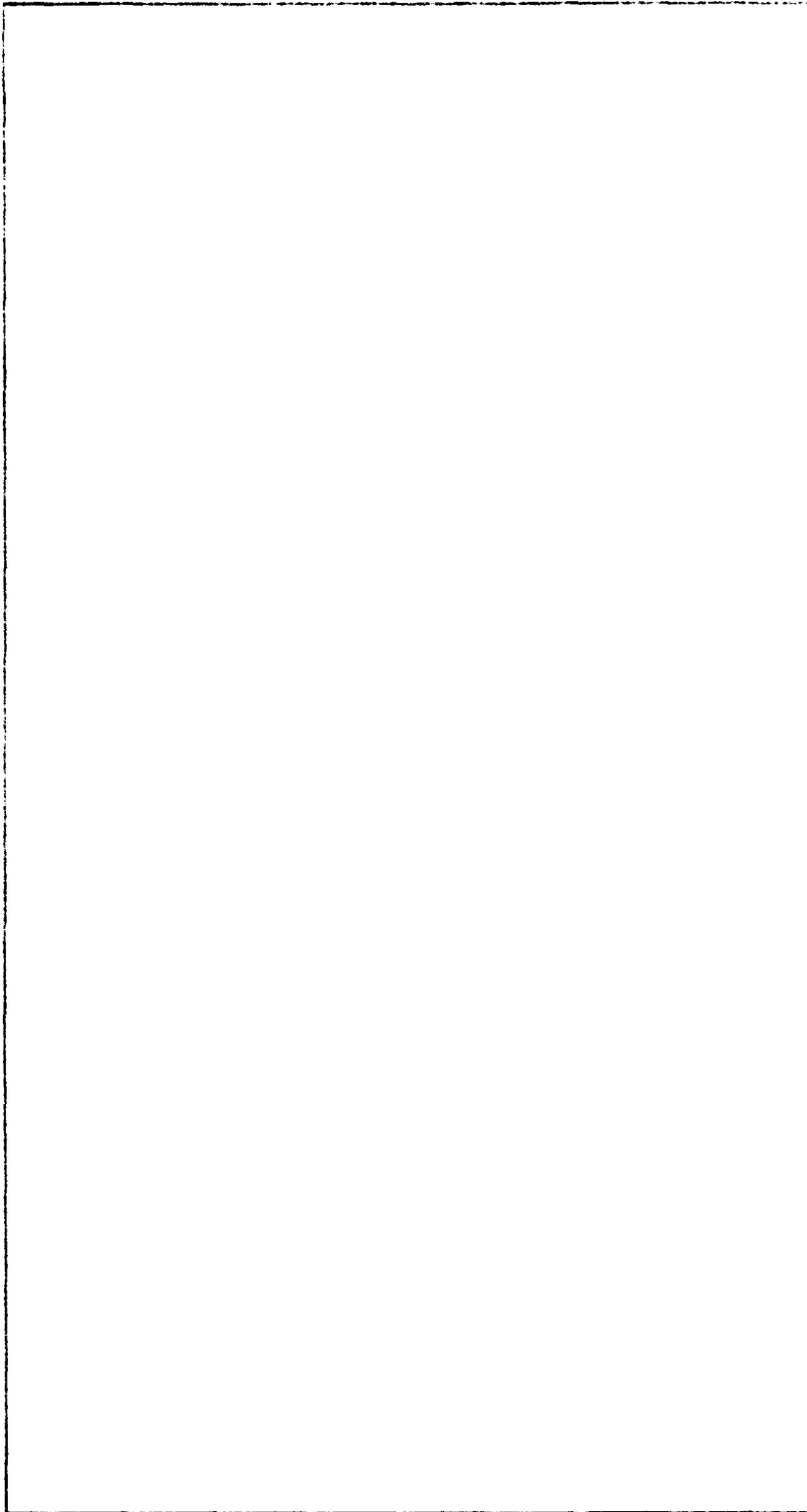
## **Profile**

Dr. Chuck Myers is a Senior Member of the Technical Staff at the Software Engineering Institute (SEI), where he works within the Transition Enabling Program. Chuck received his BS degree from the United States Military Academy at West Point, NY, and his MS and PhD degrees from Indiana University. He served for eight years as a commissioned officer in the U.S. Army Signal Corps and worked with Grumman Aerospace Corporation for nine years. He has been at the SEI since 1987, where his primary work has been with organizations engaged in software process improvement (SPI) efforts. The focus of his work has been on organizational and human issues that enable achievement of technical SPI objectives. Chuck teaches both the Managing Technological Change course and the Consulting Skills Workshop offered by the SEI, and he is the lead for the Technology Adoption Architectures project.

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## Risk Management in Practice: Effective and Ineffective



**Audrey J. Dorofee**  
SEI



**Ray Williams**  
SEI

### Abstract

#### *What you will learn:*

A comprehensive approach for managing risks in programmes, including the concepts, activities and issues associated with initiating and sustaining risk management within a project and extending it to include both customer and supplier. Risk management functions - identifying, analysing, planning, tracking, controlling and communicating risks - are illustrated through examples of risks and key methods and tools.

#### *Who should attend:*

People with little or no knowledge of risk management, or anyone wanting to understand the SEI's approach to risk management.

### Profile - Audrey J. Dorofee

Audrey J. Dorofee is a senior member of the technical staff at the Software Engineering Institute and has been with the Risk Program since 1992. She currently leads the Continuous Risk Management development and transition team and is one of the primary authors of the *Continuous Risk Management Guidebook*. Before joining the SEI, she was a member of the technical staff at the MITRE Corp., providing acquisition support and systems engineering for the National Aeronautics and Space Administration (NASA) Space Station Program. Prior to MITRE, she was with NASA for ten years at the Kennedy Space Centre, performing software systems engineering for the Shuttle Launch Processing System and early Space Station user interface requirements. She holds B.S. and M.S. Degrees in Computer Science from Florida Institute of Technology and the University of Houston at Clear Lake, respectively. She is a member of the IEEE Computer Society and ACM.

### Profile - Ray Williams

Ray C. Williams is a senior member of the technical staff at the Software Engineering Institute where he has been in the Risk Program since he arrived in 1991, and in the Team Risk Management project since it was formed in 1992. Ray's early career was spent in instrumentation, logic hardware, and integrated computer system design, first in Naval

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AMSTERDAM 16-19TH JUNE 1997



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nuclear applications (rod control, primary plant instrumentation and nuclear instruments), and later in the steel industry (computer-controlled steel refining and degaussing facilities). The steel industry application experience led to seven years as a software/hardware project manager at Daxus Corporation (a 1989 management buy-out of Dravo Corporation's computer automation department) before coming to the SEI. He holds a B.S.E.E. Degree from Carnegie Mellon University and an MBA specialising in operations research and organisational development from the University of Pittsburgh.

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# Personal Software Process



**Watts Humphrey**  
SEI

## Abstract

### *What you will learn:*

The Personal Software Process (PSP) is a process-based method that software engineers can use to apply software engineering principles to their work. It uses quality management principles and the CMM framework to demonstrate the benefits of using sound engineering principles in software development and maintenance work. Results to date indicate average quality improvement of 5-10 times and productivity increase of 25% or more. This tutorial describes the PSP, a course outline, preliminary results and introduction considerations.

### *Who should attend:*

All software personnel wanting to improve their personal performance.

## Profile

Mr. Humphrey joined the Software Engineering Institute (SEI) of Carnegie Mellon University after his retirement from IBM in 1986. While at the SEI, he established the Process Programme, led the initial development of the Software Capability Maturity Model, and introduced the concepts of Software Process Assessment and Software Capability Evaluation.

Prior to joining the SEI, he spent 27 years with IBM in various technical executive positions including the management of all IBM commercial software development. This included the first 19 releases of OS/360. Most recently, he was IBM's Director of Programming Quality and Process.

Mr. Humphrey holds graduate degrees in Physics from the Illinois Institute of Technology and Business Administration from the University of Chicago. He is an SEI Fellow, a member of the ACM, an IEEE Fellow, and a past member of the Malcolm Baldrige National Quality Award Board of Examiners. His books include *A Discipline for Software Engineering*, *Managing the Software Process* (English and Japanese), and *Managing for Innovation - Leading Technical People* (English and Spanish). He was awarded the 1993 Aerospace Software Engineering Award presented by the American Institute of Aeronautics and Astronautics. He holds five US patents.

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# A Method for Defining and Improving Software Processes



**James D. Hart**  
SEI

## Abstract

### *What you will learn:*

Attendees of this tutorial will acquire a basic understanding of the key steps necessary to successfully define and improve a process. Specifically, they will learn: how process differs from activity, task and procedure; when a process is defined; the attributes of a documented process; and a strategy for defining and improving a process.

### *Who should attend:*

Members of an SEPG, Process Action Team (PAT), or a Technical Working Group (TWG) given the responsibility of defining and improving a software process. Some experience in performing software modelling would be a plus, but is not required.

## Profile

A senior member of the technical staff at the Software Engineering Institute. Lead instructor and owner of SEI's Defining Software Processes workshop. Consults with military and industry organisations in all aspects of software process improvement and business planning. Qualified instructor for SEI's "Intro to the CMM", "Managing Technological Change Workshop", and "Consulting Skills Workshop".

Practical experience: 5 years. 2 years as Manager of an SEPG; 3 years consulting and instructing Conferences, symposia, etc: SEPG Conference 1996 - Assessing software process improvement programs; and STC 1994 - CBA IPI Qualification Program

Books, articles, etc: "Acting Phase of IDEAL model for improvement." Software Process-Improvement and Practice (upcoming issue)

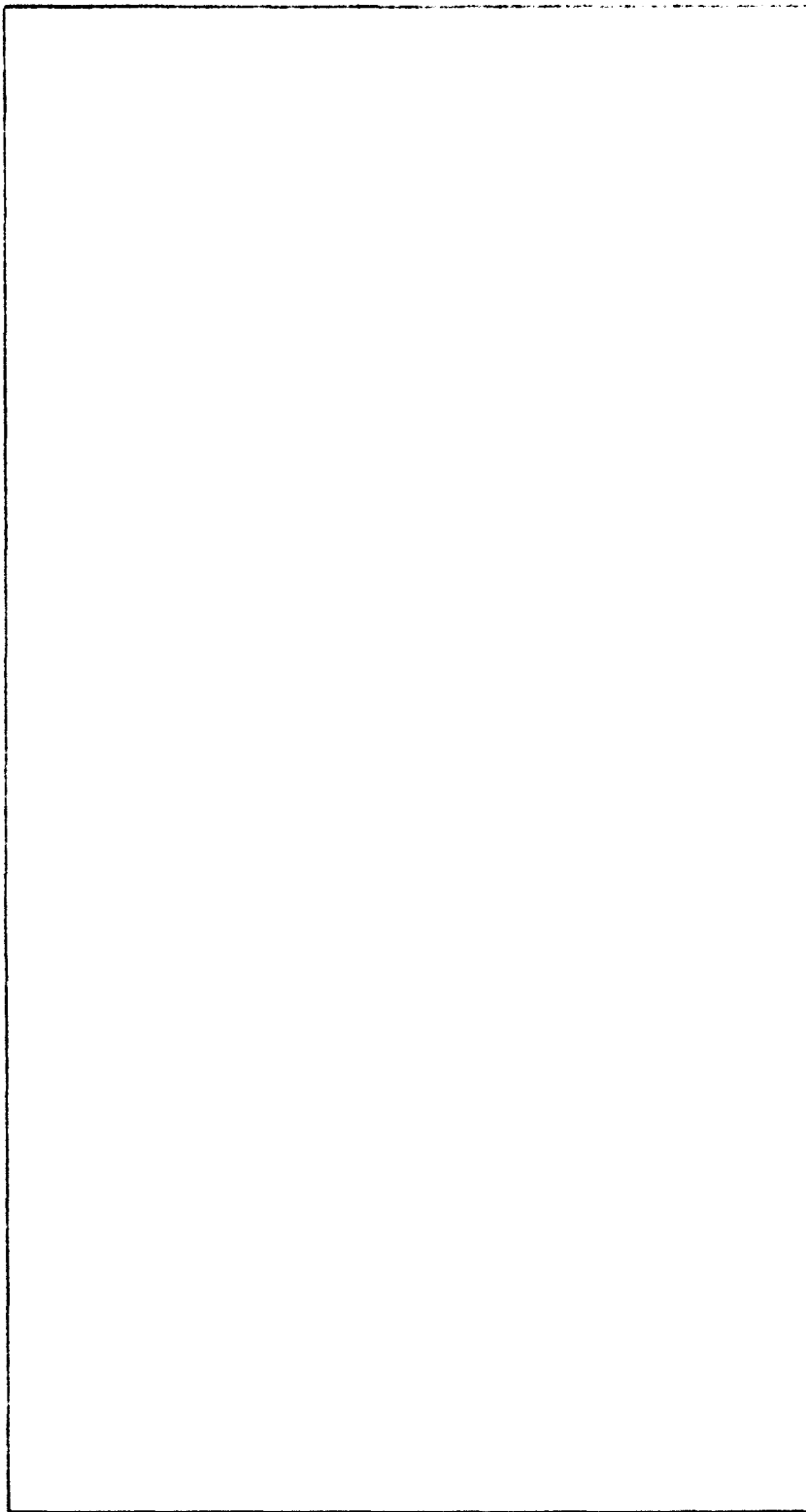
Related Educational background: Master of Science in Mathematics - University of Nebraska at Omaha, 1984; Master of Science in Computer Science - Air Force Institute of Technology, 1981; Bachelor of Science in Engineering - Univ of Central Florida, 1979; Qualified CBA IPI lead assessor - SEI Qualified MBTI trainer.

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AMSTERDAM 16-19TH JUNE 1997



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# Blind Faith is Not the Answer - Establishing a Customer Focused Requirements Process that Consistently Delivers



**Mac Craigmyle**  
Compita

## **Abstract**

### *What you will learn:*

You will learn how to establish a customer focused requirements process in detail, how to measure the process and how to improve effectiveness. You will be introduced to the various techniques that can be deployed, learn how to select the appropriate ones and how to ensure your customers are involved in the complete process - from start to finish. You will learn what other critical processes interface with the requirements process and how to define and manage these interfaces.

### *Who should attend:*

Process managers/owners with a responsibility for the requirements process, IT managers and system analysts.

## **Profile**

Mac Craigmyle is the architect of the Process Professional Model and Assessment method, part of the Process Professional Portfolio of products and services. He is principal UK expert for SPICE (Software Process Improvement and Capability dEtermination) the international project developing an ISO standard for software process assessment.

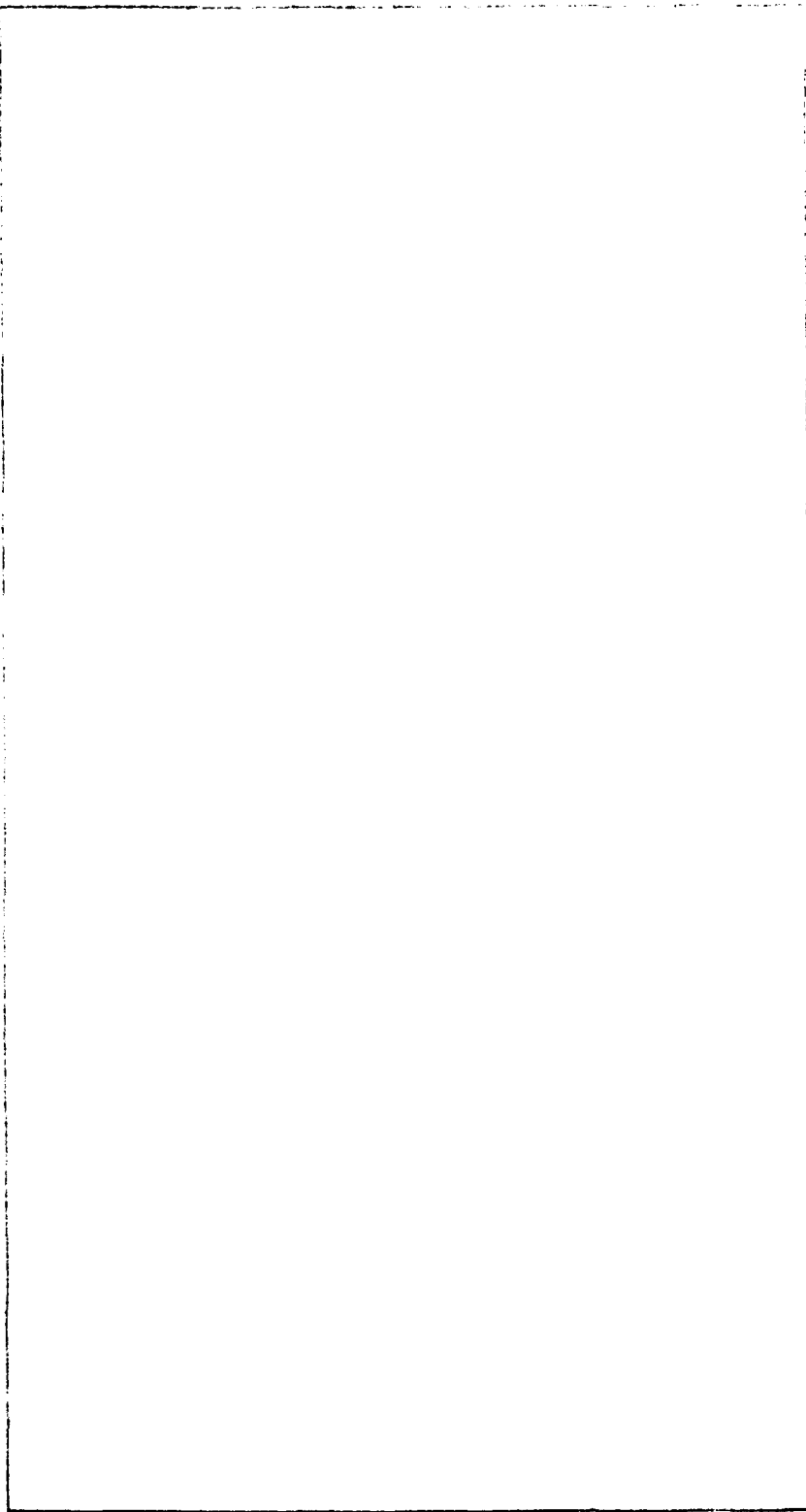
This year alone Mac has participated in assessments conducted by some of the largest companies in the UK, extending the Process Professional Model to match their business requirements. This has involved incorporating systems and hardware processes into what was originally designed to encompass software development.

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## Process Improvement Action Planning



**John D. Vu**  
The Boeing  
Company

### Abstract

#### *What you will learn:*

This tutorial will present, in detail, a step-by-step approach to action planning and process improvement deployment developed and being used at the Boeing Company to accelerate the software improvement efforts. Using examples and a case study, the presenter will guide the audience on how to put an action plan together and how to monitor deployment activities to ensure success.

#### *Who should attend:*

People in organisations that have conducted an assessment but are having difficulty coming up with an action plan, or are not able to deploy process improvement successfully.

### Profile

John D. Vu is an Associate Technical Fellow with Software Engineering Research & Technology at The Boeing Company. John is currently leading Boeing company-wide software process improvement. John has over 20 years of experience in software development and project management.

Prior to joining Boeing, John worked at Terdyne, Litton Industries, and GTE. He has worked on the Navigation Systems for the Tomahawk Cruise Missile, F-15, AH-64, and designed Signal Processing Systems for many RADARs sites. He also worked on the development of the 777 at Boeing.

John is a visiting scientist at The Software Engineering Institute (SEI) at Carnegie Mellon University. He is a SEI authorised Lead Assessor, and was voted the "Most Active Lead Assessor" by the SEI in 1996. John is also a former member of the CMM Advisory Board. He is the co-author of Boeing's Advanced Quality Systems (AQS): a system to establish customer-supplier relationship. John has published over 20 technical papers on software engineering disciplines and has presented many papers at various software engineering conferences worldwide.

John received his BS in Electrical Engineering at Ohio University and a MS in Computer Science at University of Nevada. John is also a member of the IEEE and ACM.

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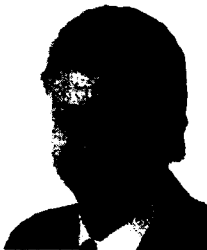
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**BOEING**



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## Project Planning, Tracking and Configuration Management for Project Leaders



**Tim Kasse**  
ISPI



**Peter Leeson**  
ISPI

### Abstract

#### *What you will learn:*

Project Management is a job that requires specific aptitudes and training. This tutorial captures the essence of project management, reviewing the main tasks (with the exception of people management and motivation) required of a project manager in order to ensure the success of the project. The tutorial will cover the stages of a project: Planning, Managing and Closing.

#### *Who should attend:*

Project managers who would like a practical introduction to the software support concepts including configuration management and software quality assurance as they support the project leader.

### Profile - Tim Kasse

Tim Kasse is the co-founder, Chief Technical Officer, and Principal Consultant of ISPI founded in 1991. His accomplishments include the development and delivery of Software Process Improvement seminars and workshops, Software Process Assessment development, customisation, training and coaching, and consulting on the Capability Maturity Model and Process Improvement. He is the architect behind the ISPI Action Focused Assessment which has been applied in major organisations throughout Europe. He is the developer and Lead Consultant for ISPI's Software Quality Assurance Workshop. Mr Kasse is a trained ISO 9000 auditor.

Prior to starting ISPI, Mr Kasse spent four years at the Software Engineering Institute. He has participated in over 43 Software Process Assessments, 23 of which have been conducted in Europe. During his tenure at the SEI, Mr Kasse served the Software Process Assessment (SPA) Project as a contributing member, as the task leader for the Self-Assessment effort, and as the Manager of the SPA Project. Mr Kasse was a major contributor to the development of the Capability Maturity Model, which provides the framework for the SEI's assessments and evaluations. Mr Kasse has been certified by the SEI to conduct SEI CBA IPI's. He has 25 years of software related experience.

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AMSTERDAM 16-19TH JUNE 1997





**Profile - Peter Leeson**

Peter Leeson has over twenty years experience in the Software Development industry, working in most European countries (in particular Belgium and France) as well as in the United States. He has experience in development as well as in project management in the commercial software area. He has been working for the Institute for Software Process Improvement Inc since 1995 and has conducted a number of assessments and consulting to organisations in France, Germany, the Netherlands, Belgium, and the United Kingdom.

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## Conference Co-Chairs



**Bill Peterson**  
SEI



**Chris Larner**  
Lloyds TSB Group



**Hans Sassenburg**  
Netherlands SPIN  
(SPIDER)

### Profile - Bill Peterson

Bill Peterson is the Director of the Software Process Improvement Program at the Software Engineering Institute (SEI). This program works with organisations throughout government, industry and academia to transition proven process management techniques into practice.

Mr Peterson's current thrusts are to transition the SEI's Capability Maturity Model (CMM) for Software into the state of the practice through the IDEAL (Initiating, Diagnosing, Establishing, Acting, and Learning) framework. His interests lie in providing SEI process products and services, as well as evaluating and reporting on the benefits of software process improvement that result from the transitioning of the models.

Mr Peterson has over 23 years of industry experience with the IBM Corporation. With IBM, he worked on several development projects as Software Manager, as well as orchestrating process improvement activities. Most of this experience is in the areas of managing software projects, in software process definition and management, and teaching software engineering.

Mr Peterson received a Bachelor of Science degree in 1969, with emphasis on Industrial Engineering and Operations Research, from Cornell University. He has been the project leader of the SEI's CMM Project and has represented the SEI at software conferences and panels on software process. These currently include serving as the SEI member of annual European Software Engineering Process Group (SEPG) Conference, and keynoting at Boeing's Software Supplier Symposium. He is an active member of the SEI's CMM Advisory Board and the Process Program Advisory Board.

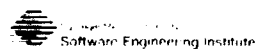
### Profile - Chris Larner

Chris Larner BSc(Eng), ACGI, C.ENG, MIMechE, MBCS is the Head of Change Co-ordination and Advice for the IT and Operations Division of Lloyds TSB which is implementing a number of changes including a process improvement programme based on the Capability Maturity Model.

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AMSTERDAM 16-19TH JUNE 1997



He has been the chairman of the ESPI Foundation for the last 3 years during which time he has represented Lloyds TSB, the current chair organisation. He has presented the experiences of Lloyds TSB at several events including the 1995 SEPG conference and the 1<sup>st</sup> World Quality Congress, and has co-authored a paper on SPI for the European SPIDER project.

He has 20 years' IT experience obtained in the Petrochemical, Chemical Manufacturing, Management Consultancy and Financial Services Industries. During this time, he has worked in the Line Manager, Application Architect, Project Manager, Senior Consultant, Systems Analyst and Programmer roles.

Chris is married with three children and a teleworking terminal. These, together with a love for DIY, leave little time for anything else.

**Profile - Hans Sassenburg**

Hans Sassenburg is a Senior Business Consultant actively with Alert Automation Services B.V. in Veldhoven. This company offers consultancy and training services in various Dutch organisations. These services include CMM-based assessments, dedicated CMM, PSP and metrics training and implementation of strategic improvement programmes.

He participates in the Dutch SPI Network, SPIDER, and is also part-time lecturer at the Eindhoven University of Technology.

EUROPEAN  
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## How Competitive is the European Software Industry?



**Jaap van Scheijen**

Ministry of  
Economic Affairs,  
The Netherlands

### **Abstract**

In advance of the current presidency of the European Union, the Dutch Government, has commissioned a global benchmarking study by Booz Allen & Hamilton of the Information and Communication Technology industries. The objective was to contribute ideas for policy changes and initiatives which could assist ICT sector players in Europe to enhance their global competitiveness. This presentation will touch upon a few of the key findings of this study.

Another subject of the presentation will be the SoftWare Action Plan 1996 - 2000 (SWAP 2000), an initiative of the Ministry of Economic Affairs to bring forward software development in The Netherlands. An update will be given on relevant activities being undertaken under the SWAP 2000 umbrella.

### **Profile**

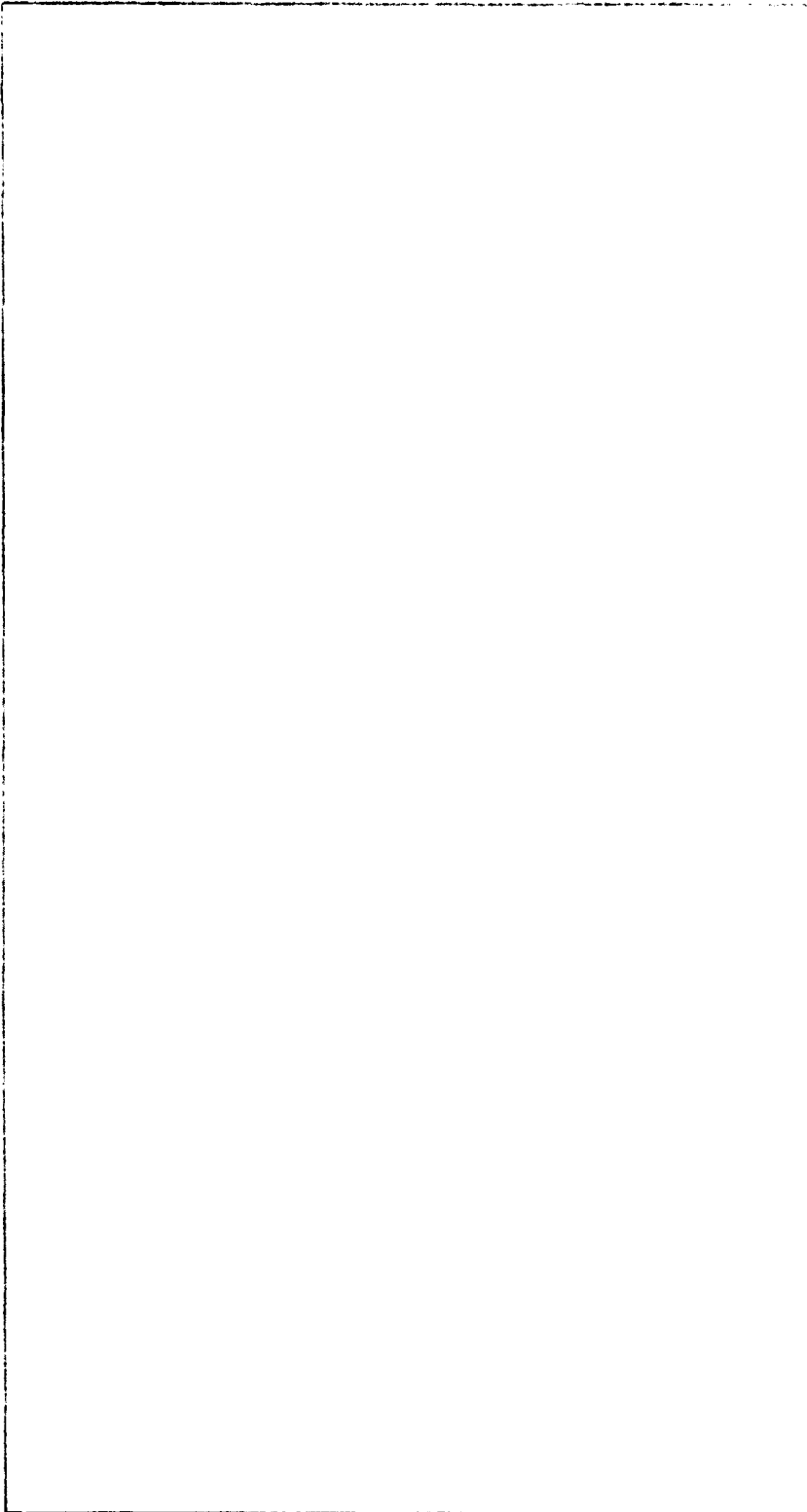
Mr Jaap van Scheijen graduated in Political Sciences in 1975. He worked for the Ministry of Economic Affairs in several functions. Since 1992 he has held the post of *Director of the Electronics, Services and Information Technology Department*.

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AMSTERDAM 16-19TH JUNE 1997



Ministry of Economic Affairs



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## Professional Software Development in Europe - A Brief Assessment



**David Talbot**

European  
Commission

### **Abstract**

This keynote presentation will review the heterogeneous nature of software development activities in Europe, outline some of its main components and its contribution to the overall economic well-being of the EU. David Talbot will also offer a view of current strengths and weaknesses and point to a number of the major Commission initiatives that aim to assist in improving competitiveness in this area.

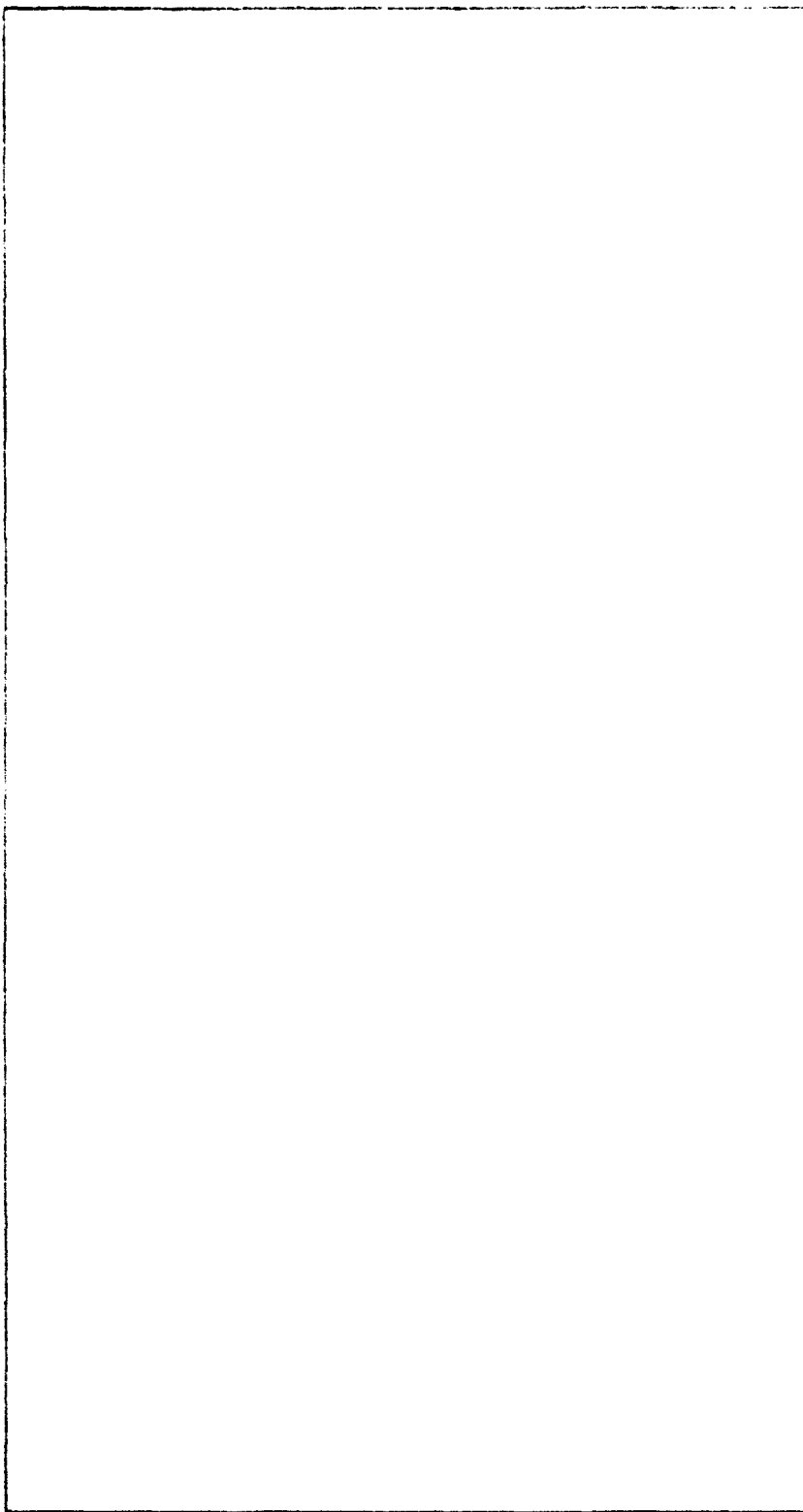
### **Profile**

David Talbot has been with the European Commission since 1989 where he is responsible for ESPRIT's activities in the area of Software Technologies. ESPRIT is the Information Technology R&D Programme of the European Union. It promotes and supports collaborative projects that both advance key aspects of the technology and explore the use of these advances in a range of practical but demanding application environments. Prior to joining the Commission he has spent the whole of his working life in the "computer business": he has worked on a variety of early computer systems; held management appointments covering technical, business and marketing activities and for four years worked on secondment to the UK Department of Trade and Industry as the first Director of Software Engineering in the UK Alvey programme. As a spare time activity he also had the pleasure of acting as a non-executive Director of a Cambridge start up specialising in the design and production of top of the range Digital Signal Processing Systems (DSPs). He has a degree in Mathematics from Oxford University.

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AMSTERDAM 16-19TH JUNE 1997





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# Models of SPI: Getting Beyond Case Studies



**Bill Curtis**

TeraQuest Metrics  
Inc.

## Abstract

Process improvement is not a single method. It is a collection of methods each of which works well in some situations and badly in others. Most presentations at previous SEPG conferences have presented case studies of successful results. However, from these reports it is hard to glean lessons about what improvement techniques work best under differing circumstances. Improvement models range from technology adoption rates, to IDEAL, to organisational development. These models often provide conflicting suggestions for how to conduct a successful improvement programme. Should the programme be driven top-down or bottom-up. Should it focus on changing culture or practices? Should it take the CMM focus on maturing the organisation, or the SPICE approach on maturing individual processes? Should an SEPG be formed at level 2 or at level 3, and what should be its primary duties once started? People initiating process improvement programmes are uncertain about how to start, and the SEPG community needs to provide them better guidance.

The SEPG conferences must now shift away from the case studies that were adequate during the formative years to justify starting a programme. As a community we need to begin assessing the effectiveness of different models for guiding software process improvement and the conditions under which they are most effective. This talk will review some of these models and the conditions under which they seem to be most effective. The goal of this keynote is to change the dialogue at SEPG conferences forever.

## Profile

Dr. Bill Curtis is Co-founder and Chief Scientist of TeraQuest Metrics in Austin, Texas where he works with organisations to increase their software development capability. He is a former Director of the Software Process Program in the Software Engineering Institute at Carnegie Mellon University. He led the project to produce the Capability Maturity Model from the process maturity framework developed by Watts Humphrey. He continues as a Visiting Scientist at the SEI where he is the principal architect and author of the People - CMM. Prior to joining the SEI,

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AMSTERDAM 16-19TH JUNE 1997





Dr. Curtis directed research on advanced computing technologies in the Software Technology Program and the Human Interface Laboratory at MCC, developed a worldwide software productivity and quality measurement system in ITT's Programming Technology Centre, experimentally evaluated software engineering methods in GE's Space Division, and taught statistics at the University of Washington. He is a co-author with Mark Paulk, Charles Weber, and Mary Beth Chrissis of the Addison-Wesley book, *The Capability Maturity Model: Guidelines for Improving the Software Process*, and has published over 100 technical articles in the areas of software engineering and management. He is on the editorial boards of 6 technical journals in software engineering and user interface technology, and is a frequent keynote speaker at software conferences.

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# Competence in Software and Engineering - Siemens' Software Initiatives



**Axel Völker**  
Siemens AG



**Gerd Wackerbarth**  
Siemens AG

## Abstract

Goals and approaches of the enterprise-wide Siemens' Software Initiative and the experiences gained so far will be presented. As an example, the successes of one of Siemens' group-specific software initiatives, focusing on business-specific goals, will be presented. By focusing on Cut Cycle Time by 50% by Comprehensive Re-Engineering of the Entire Product Life Cycle, the development time for a basic product version could be reduced from 27 months in 1992 to 13 months in 1996. The development of customer specific adaptations was cut in the same time frame from 11.3 to 5.9 months.

## Profile - Axel Völker

Axel Völker manages the Siemens Software Initiative in cooperation with board members from Siemens' groups together with Monika Gonauser, the chief of his department. Furthermore, he is responsible for benchmarking Software Initiatives and Engineering 'best practices' in the Software Department at the Siemens' Corporate Research Division in Munich, Germany.

Mr. Völker introduced Software Process Assessments at Siemens. Results from these Process Assessments and experience gained from various related improvement programmes are now available in about 70 diverse business areas. Mr. Völker also managed ESPRIT technology integration projects dealing with systems engineering (130 members across the European countries).

Major achievements have been to inaugurate Software Process Assessments at Siemens, to extend them to be used in systems engineering and engineering of industrial plants, and finally to launch the Siemens' Software Initiative throughout the entire corporation. Mr. Völker received his degree in mechanical engineering from Technical University Munich in 1972.

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AMSTERDAM 16-19TH JUNE 1997



**SIEMENS**

**Profile- Gerd Wackerbarth**

Gerd Wackerbarth, born in 1950 in Kassel (Germany), studied electrical engineering at the Technical University of Munich. He joined Siemens in 1976, starting with software development for telex PABXes in Cherry Hill, New Jersey and in Munich. In 1980 he moved to the Central Laboratories for Communication Technologies, where he was responsible for the software development of pilot projects for broadband switching. His team was involved in the world's first ATM (Asynchronous Transfer Mode) switch which was taken into service in Berlin in 1990. From 1993 he led the department for basic software development of Siemens' large digital switching system EWSD as director of R&D. Since 1995 he is Vice President and member of the management board in the business unit Switching Networks of the Public Communication Networks Group, responsible for quality management, process optimisations, and management training.

EUROPEAN  
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# Managing Culture Change



**Ken Taylor**  
Post Office  
IT SERVICES

## Abstract

We often hear talk of the need to change to a culture of greater customer focus and innovation. But how do we change the mind-set of our staff to achieve this? It means taking risks.

Do our reward systems favour those who took a calculated risk and lost? Should they?

The answer often involves improving our processes, but we must be very careful not to stifle our staff with the P word. This presentation is a case study in an approach designed to free rather than constrain.

## Profile

Ken Taylor has worked in the IT industry for over 30 years starting as a Trainee Programmer.

He joined the Post Office in 1981 as a project manager for financial systems. His first involvement in changing attitudes towards greater customer focus was in the formation of an Executive and Office Systems group within Post Office IT SERVICES (the IT department of the Post Office).

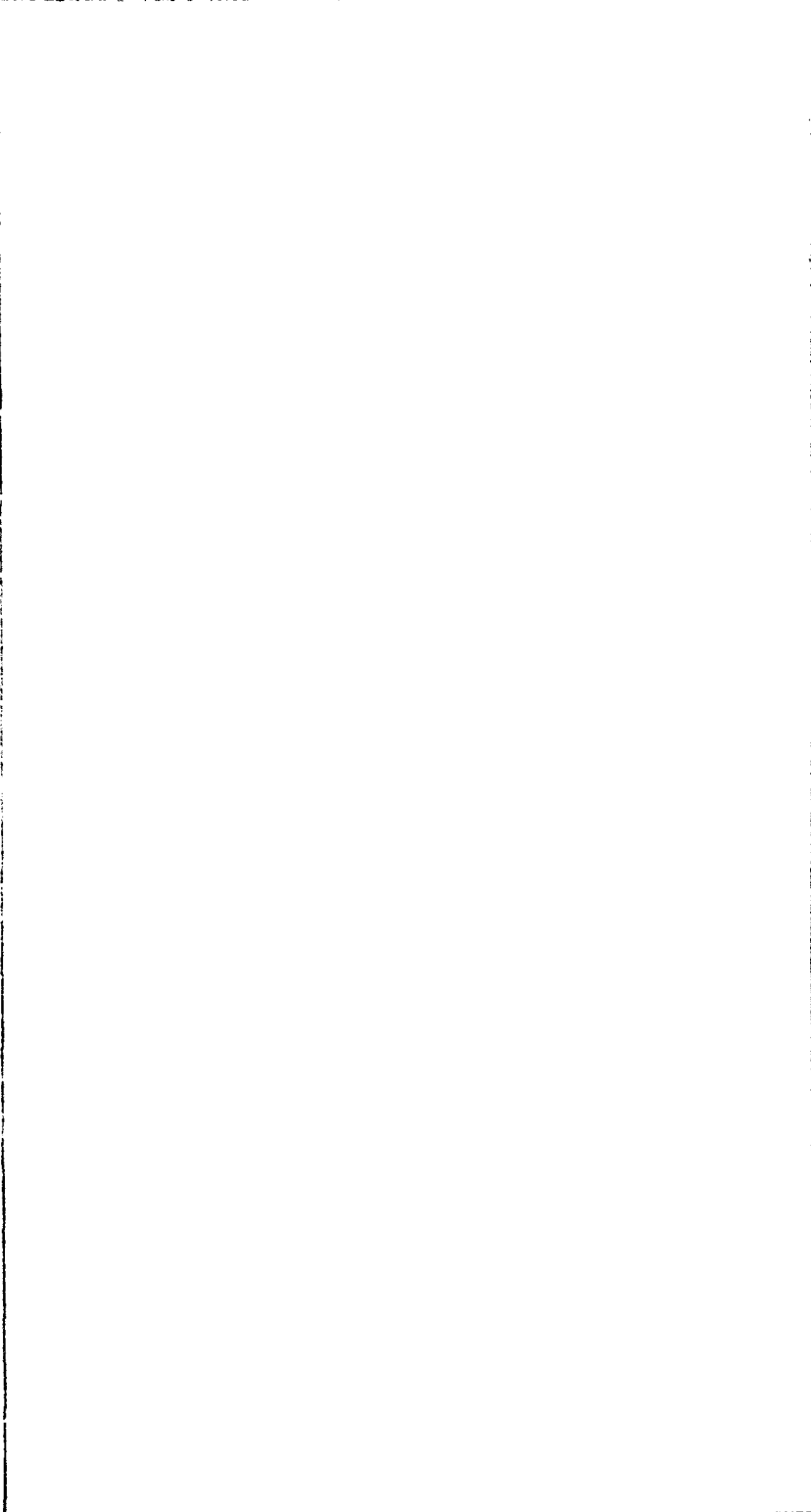
Since then he has led the formation of an Account Management function for IT SERVICES (as Customer Services and Marketing Director) and run the 450 people strong development shop with a remit of introducing greater customer focus to the operation.

In April 1995 Ken took on his current role of Director People and Resources further cementing his involvement in the change process and giving him overall responsibility for shaping the culture of the organisation and resourcing the various delivery functions through skills groups and assignment based working.

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AMSTERDAM 16-19TH JUNE 1997

**THE POST OFFICE  
IT SERVICES**



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# Software Measurement Across a Global Enterprise



**Gerry Pasternack**  
CitiCorp



**David Zubrow**  
SEI

## Abstract

This presentation provides an interim report on a continuing effort within CitiCorp to establish an enterprise-wide metrics programme. This effort involves CitiCorp units from around the world with different cultures as well as in different enterprise units of the corporation. We will report on the challenges confronted when working on a programme of this scale and diversity. We will also present our lessons learned and the solutions developed to move this effort forward.

## Profile - Gerry Pasternack

As a member of the CitiCorp Technology Office, Mr. Pasternack works directly with the Senior Technology Officer of the Corporation to define and implement technology-related initiatives. His field of expertise is Software Engineering, and he has been involved in areas of metrics, data environments, and Y2000 strategies.

Prior to joining CitiCorp, Mr. Pasternack worked for more than 30 years for a major R&D corporation, where he headed an organisation providing software platforms, tools, and processes.

Mr. Pasternack holds PhD(EE), 1975, from Polytechnic Institute of New York. He is the author of several talks and papers on hardware and software development, and has been granted more than a dozen Patents in this area.

## Profile - David Zubrow

David Zubrow is Team Leader for the Software Engineering Measurement and Analysis group within the SEI's Software Process Program. His areas of expertise include empirical research methods, data analysis, and data management. Since his arrival at the SEI in 1992, Dave has been a lead developer of the latest Software Process Maturity Questionnaire, part of the development team for the Interim Profile appraisal method, and manager of the SEI Process Appraisal Information System. He recently co-authored technical reports entitled "Software Process Automation: Experiences from the Trenches," "Moving on Up: Data and Experiences

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AMSTERDAM 16-19TH JUNE 1997

**CITICORP**

 **Software Engineering Institute**

## Software Measurement Across a Global Enterprise Continued

doing CMM-based Software Process Improvement" and "Benefits of CMM-Based Software Process Improvement: Initial Results."

Dave is an SEI-authorized Lead Assessor and recently became one of the first Software Quality Engineers certified by the American Society for Quality Control. Prior to joining the SEI, Dave was Assistant Director of Analytic Studies for Carnegie Mellon University where he earned his PhD and MS degrees.

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# Ethics and the Software Process



**Michael Cavanagh**  
Balmoral Consulting

## Abstract

The discipline around software production is, in reality, quite immature; combined with its unique properties of intangibility, intolerance - and indispensability - this makes software (to say the least) bloody dangerous. This paper argues that ethical considerations need to be a part of the software process if we are to manage the risks associated with 'unethical' - i.e. irresponsible or even negligent - development of software-intensive systems which, under current legislation, could result in massive liability actions.

## Profile

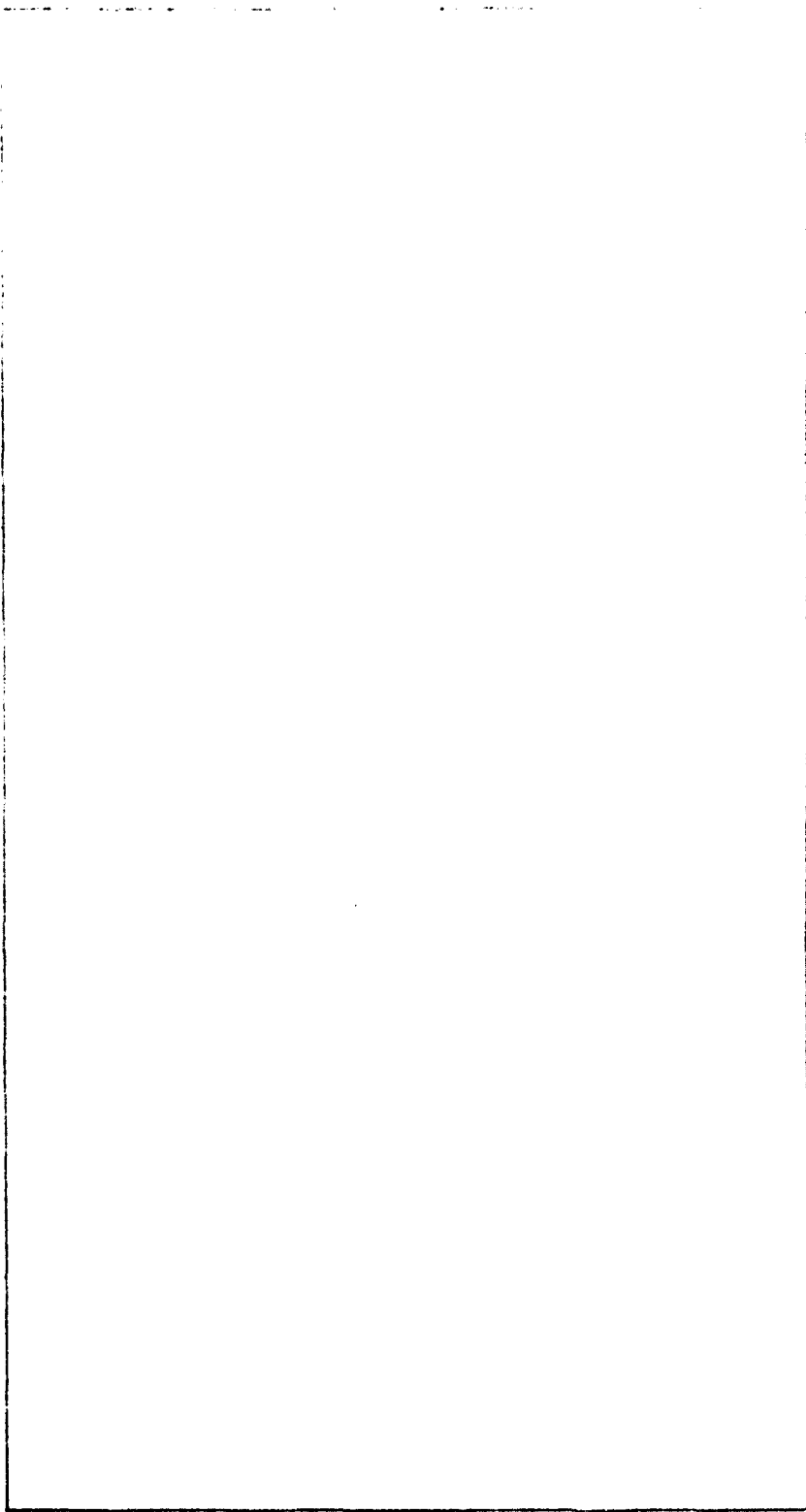
Michael Cavanagh is currently Managing Director of Balmoral Consulting, which has specialised in the Software Process field for the last six years. Before joining Balmoral, Michael was Head of Software Engineering at the National Computing Centre and Director of the STARTS Programme. He has occupied management positions for over half of his thirty-year career, concentrating on aspects of Software acquisition from the perspectives of both purchaser and supplier. This practical experience has led him to the belief that it is management of the 'softer' issues around the people in the process which are the most critical to **real** improvement in the delivered product. He sees the P-CMM as a major contributor to the improvement of the management of the overall development process.

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GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM 16-19TH JUNE 1997

Balmoral  
Consulting





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# Setting up SPI in a Multi-Cultural and De-Centralised Engineering Company



**Winifred Menezes**

ABB Corporate  
Research



**Bernhard  
Eschermann**

ABB Corporate  
Research

## **Abstract**

How does one start and keep alive software process improvement in a large decentralised electrotechnical organisation? Unfortunately, there are no patented answers just lessons to be learnt from others' experiences. This presentation will describe the successes and failures at ABB, Asea Brown Boveri, a multi-national engineering group with over 200,000 employees worldwide. In particular, it will consider efforts in ABB Sweden, where a top management sponsored initiative called TOPP was started in mid 1995 and ABB Switzerland, where a similarly structured programme called SWITCH took off in 1996. As apparent from the different names, the implementation of these two initiatives in the different countries is different, in spite of common challenges and goals.

## **Profile - Winifred Menezes**

Winifred Menezes is employed at ABB Corporate Research in Sweden where she is responsible both for the software engineering group and for ABB Sweden's initiative for software process improvement. Winifred joined ABB in mid 1994. Previous to that she worked for 13 years as a consultant at Cap Gemini. During these years Winifred worked with process and methodology development, training and all the phases of software development and maintenance.

Winifred is active in SPIN-Sweden and has served on the programme committee for European SPI conferences.

## **Profile - Bernhard Eschermann**

Bernhard Eschermann manages the "Information Technology" group of the Swiss ABB Corporate Research Centre and is the project leader of "SWITCH", a software process improvement initiative for ABB Switzerland.

He holds a diploma in electrical engineering from the University of Karlsruhe in Germany, an M.S. in electrical engineering and computer sciences from the University of California at Berkeley in the US, and a PhD in computer science from the University of Karlsruhe.

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AMSTERDAM 16-19TH JUNE 1997

ABB Corporate Research

**ABB**

## Setting up SPI in a Multi-Cultural and De-Centralised Engineering Company

Continued

Since 1993 he has been with ABB Corporate Research in Switzerland. He first worked on projects in the area of dependable protection/control systems (e.g. for railway signalling and power transmission). Through these projects he became more and more involved in software development issues. After assuming responsibility for the IT group, which as a part of their work provides support for Swiss ABB companies to improve software development, he realised that a top-down approach to support the existing bottom-up efforts would be helpful.

He then took the initiative to convince Swiss country management to initiate SWITCH. After the decision to actually implement this ABB Swiss-wide software process improvement program, he has become responsible for its implementation.

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## Capability Maturity Model for Software, Version 2.0



**Bill Peterson**  
SEI

### Abstract

The first significant upgrade of the CMM for Software (SW-CMM) since 1993 will be made this year. All maturity levels will be impacted by this upgrade. This talk will identify the drivers for changing the CMM as well as an overview of what the impacts will be. The roll-out of drafts of CMM Version 2.0 will be described and it will be indicated how you can get early views of this next version.

### Profile

Bill Peterson is the Director of the Software Process Improvement Program at the Software Engineering Institute (SEI). This program works with organisations throughout government, industry and academia to transition proven process management techniques into practice.


Mr Peterson's current thrusts are to transition the SEI's Capability Maturity Model (CMM) for Software into the state of the practice through the IDEAL (Initiating, Diagnosing, Establishing, Acting, and Learning) framework. His interests lie in providing SEI process products and services, as well as evaluating and reporting on the benefits of software process improvement that result from the transitioning of the models.

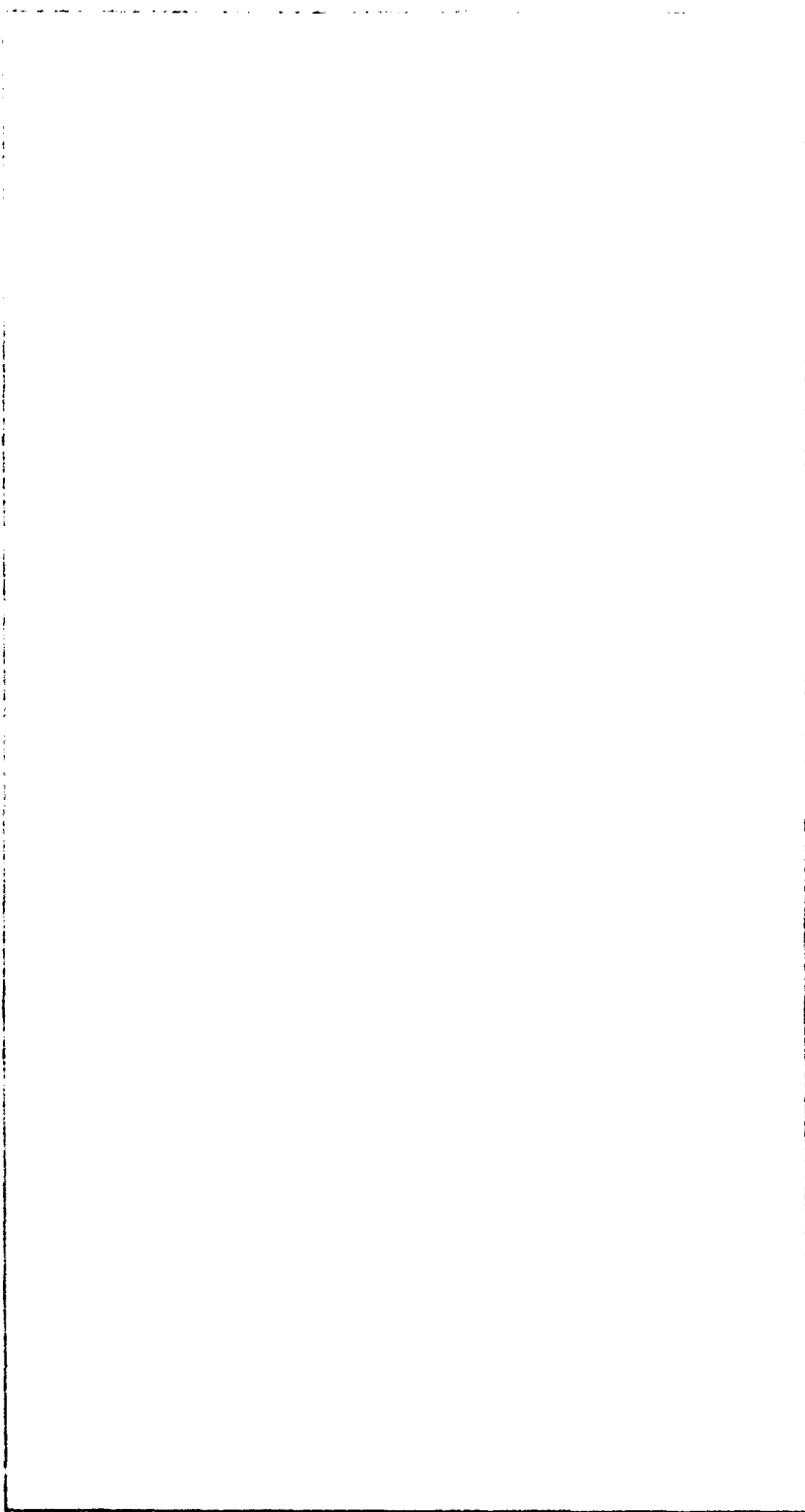
Mr Peterson has over 23 years of industry experience with the IBM Corporation. With IBM, he worked on several development projects as Software Manager, as well as orchestrating process improvement activities. Most of this experience is in the areas of managing software projects, in software process definition and management, and teaching software engineering.

Mr Peterson received a Bachelor of Science degree in 1969, with emphasis on Industrial Engineering and Operations Research, from Cornell University. He has been the project leader of the SEI's CMM Project and has represented the SEI at software conferences and panels on software process. These currently include serving as the SEI member of annual European Software Engineering Process Group (SEPG) Conference, and keynoting at Boeing's Software Supplier Symposium. He is an active member of the SEI's CMM Advisory Board and the Process Program Advisory Board.

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AMSTERDAM 16-19TH JUNE 1997

 Software Engineering Institute



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## Using SPI Principles to Improve the Value of Legacy Systems



**Ashley Travis**  
Bank of America

### Abstract

The Global Systems Development department has, over five years, used SPI principles to redefine "legacy", to improve development productivity and quality, and to introduce new opportunities for technology integration. In parallel, it has implemented a consistent metrics programme and validated progress using external benchmarks such as the IBM Survey of Software Development Performances and Practices, and the Software Engineering Institute's Capability Maturity Model.

Ashley Travis will explain the rationale behind this programme, share his experiences with benchmarks and demonstrate the benefits which have accrued to the Bank of America.

### Profile

Ashley is a Vice President and Systems Director in the Commercial Systems Services group of Bank of America's Systems Engineering Division. His current responsibilities include development of Electronic Funds Transfer services supporting the Bank's global Cash Management businesses, Data Administration and Database Services to functional application projects and continuing support for the department's development environment. He is also engaged in continuous process improvement across several domains, including application development, project management and the interleaving of business strategies with technology architectures.

From the beginning of this decade, Ashley has been instrumental in introducing change, based on SPI principles, into his organisation. Throughout this period, a metrics programme has been in place to monitor the successful results of the investment. This has been validated by participation in IBM's "Survey of Software Development Performance and Practices in Europe" and by introduction of the CMM. Ashley has redefined "legacy" and positioned such systems to participate on Open solutions.

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AMSTERDAM 16-19TH JUNE 1997



**Bank of America**



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## Experiencing SPI at the Sharp End



**Paul Hookham**

Lloyds TSB Group

### Abstract

This presentation describes the experiences of a software Development Programme Manager who has been involved in a Software Process Improvement (SPI) initiative at the receiving end.

Lloyds Bank (now the Lloyds TSB Group) started an SPI initiative a number of years ago. This initiative, which is still on going, has experienced numerous crises and problems. One of these issues was to convince Project Management that the changes the SPI initiative would bring are of genuine benefit and add value to the projects themselves. The presenter, as Project Manager of one of the most significant and strategically important software projects in the bank, was one of those individuals.

The presentation provides background information about the SPI initiative, describes the starting position of the presenter and identifies some of the major issues his project faced in trying to implement SPI "in the field". Finally, it presents conclusions about the way to do SPI for real, the genuine benefits SPI brings to a Project Manager and the personal shift in the presenter's own view of SPI and its relevance to software projects.

### Profile

Since February 1997, Paul has performed the role of head of Project and Technical Services within the IS function of the Lloyds TSB Group. This involves the provision of services to the development and production support areas in the Lifecycle & Method, CASE, Configuration Management and SPI activities based on the CMM. Prior to this Paul was a Development Programme Manager responsible for the core development of a major, strategic software development program of some 12,000 Function Points, with 80-100 resources at any given time.

This programme of work must be delivered to a high level of quality, within a realistic timeframe, and encapsulate the challenges not only of the business requirements but also Year 2000. It is from this period of his career that Paul bases his presentation today.

Paul has 25 years IT experience, spanning both operations, development

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AMSTERDAM 16-19TH JUNE 1997





and support functions, and has successfully implemented a number of wholesale and retail banking applications for both Bank of America NT&SA and Lloyds Bank PLC, on a whole spectrum of hardware and software platforms.

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## Requirements for Winning Software Teams



**Bill Curtis**

TeraQuest Metrics  
Inc.

### Abstract

Team building is all the rage in business these days, and software organisations are catching the fad. Unfortunately, team building fails in all too many applications. This talk will present what is currently known about how to install teams successfully in organisations, and some of the special requirements for succeeding with software teams. These requirements involve organisational and cultural conditions, workforce practices, team structures and processes, and attributes of team members. Anyone disagreeing with the speaker will be thrown off the team.

### Profile

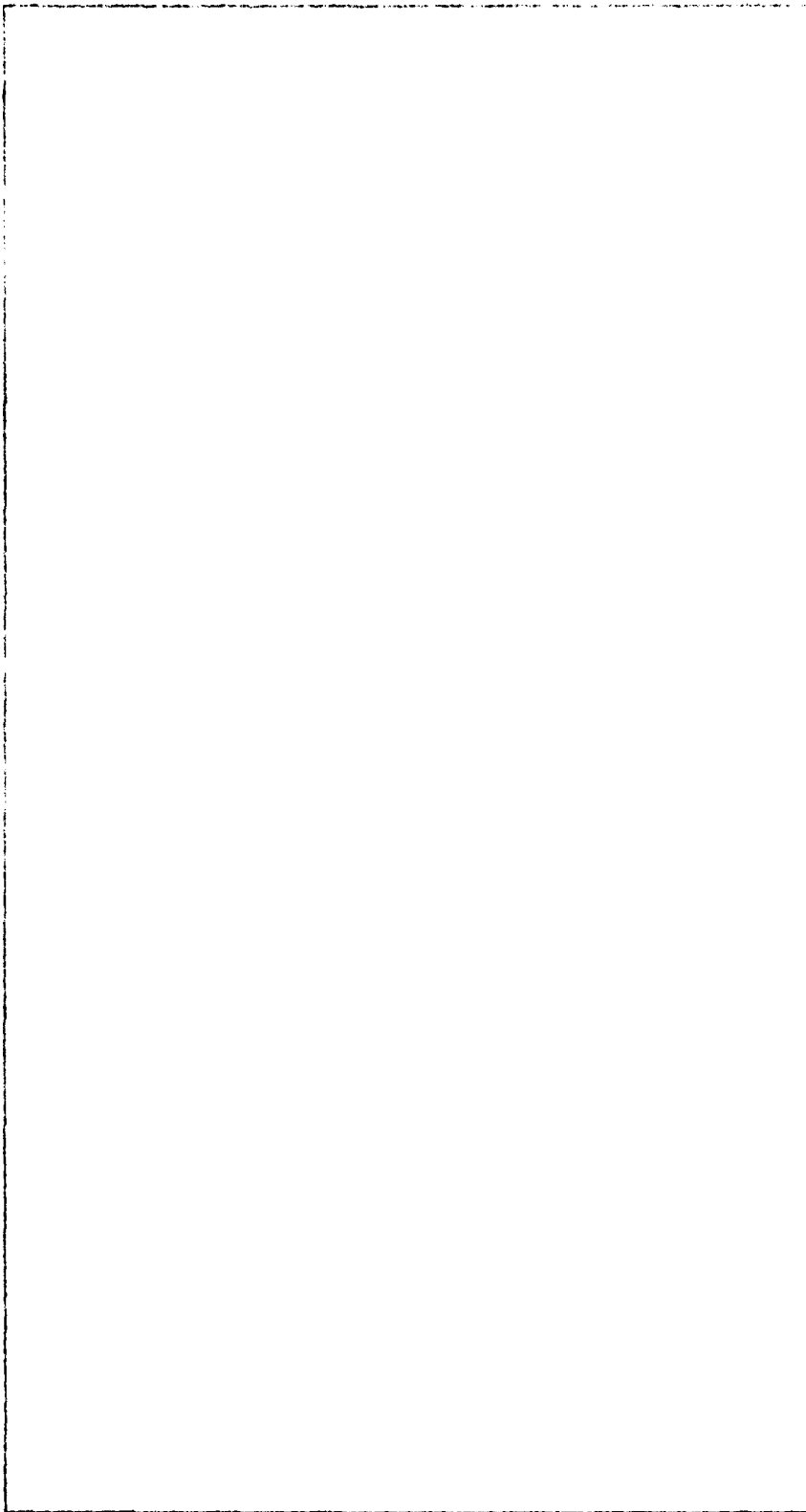
Dr. Bill Curtis is Co-founder and Chief Scientist of TeraQuest Metrics in Austin, Texas where he works with organisations to increase their software development capability. He is a former Director of the Software Process Program in the Software Engineering Institute at Carnegie Mellon University. He led the project to produce the Capability Maturity Model from the process maturity framework developed by Watts Humphrey.

He continues as a Visiting Scientist at the SEI where he is the principal architect and author of the People - CMM. Prior to joining the SEI, Dr. Curtis directed research on advanced computing technologies in the Software Technology Program and the Human Interface Laboratory at MCC, developed a worldwide software productivity and quality measurement system in ITT's Programming Technology Centre, experimentally evaluated software engineering methods in GE's Space Division, and taught statistics at the University of Washington. He is a co-author with Mark Paulk, Charles Weber, and Mary Beth Chrissis of the Addison-Wesley book, The Capability Maturity Model: Guidelines for Improving the Software Process, and has published over 100 technical articles in the areas of software engineering and management. He is on the editorial boards of 6 technical journals in software engineering and user interface technology, and is a frequent keynote speaker at software conferences.

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AMSTERDAM 16-19TH JUNE 1997





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## Challenges and Solutions for SPI in a Small Company



**Romana Vajde Horvat**

University of Maribor



**Ivan Rozman**

University of Maribor

### Abstract

Most known models for SPI (like SEI CMM, ISO standards and other methods derived from either or both mentioned) are primarily suited for large or medium organisations, but with some tailoring they also provide a substantial support for SPI in small organisations. A case of such tailoring will be presented. The presented framework was used to conduct the SPI projects within some companies. For these companies the SPI action plans were derived according to the model.

### Profile - Romana Vajde Horvat

Romana Vajde Horvat works as a teaching Assistant in the Laboratory of Information Systems at the University of Maribor and is currently a Ph.D. student. Research activities within the Laboratory cover the software engineering management, software development methodologies, software process and software quality issues. During the last ten years many projects have also been applied in a strong co-operation with Slovenian government and industry. SPI was the subject of the last three projects (PROCESSUS and others).

Romana Vajde Horvat is a member of project teams for SPI and works as a co-ordinator in some of the co-operating organisations where she gained experience, particularly in SPI within small companies. She also works in the standardisation area, where she is a president of *Technical Committee Quality Management and Assurance* at the Ministry of Science and Technology, Standards and Metrology Institute.

### Profile - Ivan Rozman

Ivan Rozman is a Director of the Laboratory of Information Systems at the University of Maribor. Research activities within the Laboratory cover the software engineering management, software development methodologies, software process and software quality issues. During the last ten years many projects have also been applied in a strong co-operation with Slovenian government and industry. SPI was the subject of the last three projects (PROCESSUS and others).

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AMSTERDAM 16-19TH JUNE 1997



Ivan Rozman has over 20 years' experience in the software engineering area. Since 1978 he has also led seven major projects of the laboratory, among which the last two were aimed to define methods and to conduct the SPI activities in co-operating companies.

Ivan Rozman is author or co-author of over 200 publications. The most outstanding publications are: two books and ten original scientific papers published in international scientific journals; others are conference papers, professional papers and project reports. He is also a member of many academic organisations.

EUROPEAN  
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## PANEL: Approaches to Process Improvement Support



Moderator

Lieuwe de Jong

Philips

Do you have a plan in place, or an idea of how assessment results will get translated into Action Plans that are implementable? Should you even start your process improvement initiative with an assessment? Do you have the organisational process improvement infrastructure in place including visible senior management support? Do you have adequate human resources available, or will you need external support to help implement your process improvement plan? How will your organisation be able to reach CMM Level 2 and at the same time support senior management's business objectives?

This panel will discuss ideas that have been successfully implemented and/or are being developed to answer these questions. The panellists will also challenge the software industry to restart thinking about process improvement, rather than concentrating on the merits of the various assessment methods and improvement models.

### Profile - Lieuwe de Jong

Since March 1996, Lieuwe de Jong has been the SPI Manager responsible for software capabilities in Philips Business Electronics. This product division is currently the most complex and the most varied when looking at software engineering capabilities. It is the division where multimedia applications and infrastructure are located.

From 1994 until 1996, Lieuwe de Jong was SPI Manager of Philips Communication Systems. In its last years, CS had more software engineers than all other Philips Product Divisions together but was facing serious business problems related to the substantial delays in the delivery of software packages.

Lieuwe de Jong joined Philips in 1985 with software engineering and artificial intelligence as his main interests. He soon encountered the immense problem of keeping software development performance up-to-date with the ever increasing need for more software. To give an example: in 1985 there were 4 Kbytes ROM of software in a high-end television, in 1995 that amount had grown to 1 Mbyte ROM of software!

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# EUROPEAN SEPG

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AMSTERDAM 16-19TH JUNE 1997



Lieuwe de Jong learned in his career with Philips that answers to help software development groups with the software growth problem are related to training, technology, organisation, product architecture and, as is being more and more recognised, process. He has been involved in all these areas, especially in the period when he was responsible for the software engineering research in the Philips Research Laboratories. It was also in that period that he helped set up the Philips - wide SPI programme.

**EUROPEAN  
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## PANEL: Approaches to Process Improvement Support



**Keith Jackson**

TBL



**Tim Kasse**

ISPI



**Phillip A.L. Halsey**

Alcatel Telecom  
Norway

### Profile - Keith Jackson

Keith Jackson works for TOK B Limited (TBL). He is a specialist in using Software Process Improvement to sustain competitive performance. He is currently managing a Software Process Improvement programme for a large UK based financial services organisation.

Keith graduated in Metallurgy at London University. He is a member of the British Computer Society (MBSC). He is an experienced conference speaker and contributor to the IT press. He holds the Financial Times Training Award.

Keith joined IBM in 1961 where he worked as a Systems Engineer. He moved to Bayer, the German pharmaceutical corporation, in the mid 1960s to help co-ordinate their European systems. Keith was appointed Data Processing Manager of Revertex, a British manufacturing company, in 1967 and established their computer based management information system. He was invited to join Hoskyns Limited to set up the management side of Hoskyns Training in 1969. He was invited to join Continental Oil Company (Conoco) in 1973 as a Senior DP Executive where he worked in the Conoco London Data Centre and in New Jersey, US.

He established the training and services company Transfer of Knowledge Limited (TOK) in 1979 which specialised in IT Human Resource Development and Management of Change. This organisation grew and evolved into TOK B Limited (TBL) which was formed in 1994.

Our experience in helping leading organisations in Europe implement business focused quality initiatives and change their culture has enabled us to evolve a way of linking business performance with process improvement. In software terms this means linking short term business goals with Software Process Improvement (SPI). We are in a world of rapid change: year 2000; Euro; global markets. There is a need to retain competitiveness as well as respond to changes imposed on us by new rules and legislation. TBL provides this capability by improving the maturity of software processes that drive competitiveness and change.

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**EUROPEAN  
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AMSTERDAM 16-19TH JUNE 1997





**Profile - Tim Kasse**

Tim Kasse is the co-founder, Chief Technical Officer, and Principal Consultant of ISPI, founded in 1991. His accomplishments include the development and delivery of Software Process Improvement seminars and workshops, Software Process Assessment development, customisation, training and coaching, and consulting on the Capability Maturity Model and Process Improvement. He is the architect behind the ISPI Action Focused Assessment which has been applied in major organisations throughout Europe. He is the developer and Lead Consultant for ISPI's Software Quality Assurance Workshop. Mr Kasse is a trained ISO 9000 auditor.

Prior to starting ISPI, Mr Kasse spent four years at the Software Engineering Institute. He has participated in over 43 Software Process Assessments, 23 of which have been conducted in Europe. During his tenure at the SEI, Mr Kasse served the Software Process Assessment (SPA) Project as a contributing member, as the task leader for the Self-Assessment effort, and as the Manager of the SPA Project. Mr Kasse was a major contributor to the development of the Capability Maturity Model, which provides the framework for the SEI's assessments and evaluations. Mr Kasse has been certified by the SEI to conduct SEI CBA IPIs. He has 25 years of software related experience.

**Profile - Phillip A.L. Halsey**

Phillip A. L. Halsey, MSc, has been responsible for the SPI programme at Alcatel Telecom Norway (ATN), Defence Communications Division since January 1996. The SPI programme is based on the Capability Maturity Model.

Phillip A. L. Halsey started his career developing network management products for military communications. His previous job was as programme manager for projects developing and manufacturing products for secure communication at ATN.

EUROPEAN  
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# SPICE and ISO/IEC 15504



**Steve Masters**

SEI



**Bob Smith**

European Software  
Institute

## Abstract

The work of the SPICE project in supporting the development of an International Standard on Software Process Assessment has resulted in a Preliminary Draft Technical Report ISO 15504. An overview of the status of ISO 15504 will be provided including feedback from the latest ISO review ballot on ISO 15504 and details of future plans. The SPICE Project continues to manage the SPICE Trials to capture industrial feedback of ISO 15504 and to validate the work through practical application. Initial results of Phase 2 of the SPICE Trials will be presented which cover progress of the trials in the 5 SPICE regions and feedback from both assessors and organisations.

## Profile - Steve Masters

Steve Masters has been a Member of the Technical Staff in the Software Process Program since joining the SEI in 1987. He is currently a project member on the CMM-Based Software Process Improvement team. He authored "CMM Appraisal Framework (CAF), Version 1.0" (CMU/SEI-95-TR-001) and is currently working on updating the CAF for CMM Version 2. Masters co-authored the "CMM-Based Appraisal for Internal Process Improvement (CBA IPI): Method Description" (CMU/SEI-96-TR-007) and is one of the two primary instructors for Lead Assessor Training. Masters also co-authored the SEI technical report "An Analysis of SEI Software Process Assessment Results : 1987-1991" (CMU/SIE-92-TR-24). Masters has participated on numerous SEI assessments and is an authorised lead assessor. Masters' special interests are in software process improvement, software process assessments and the Personal Software Process (PSP).

Before joining the SEI, Masters was an independent consultant specialising in real-time systems for clients such as Defense Communications Agency, RCA Corporation, Bendix Corporation and HRB Singer. Masters' accomplishments include porting an Automatic Test Equipment (ATE) Test Executive Control System from one operating system to another, increasing the real-time responsiveness of a vendor supplied operating system, integration of a communications package for the transfer of real-time radar target data between two mini-computers, and the

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**EUROPEAN  
SEPG**

GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM 16-19TH JUNE 1997



customising of an operating system to accept files generated by a different operating system.

Masters holds a B.S. Degree in Mathematics from Pennsylvania State University.

The SEI located in Pittsburgh, Pennsylvania, is a federally funded research and development centre operated by the Carnegie Mellon University under contract to the U.S. Department of Defence. The objective of the SEI is to provide leadership in software engineering and in the transition of new software engineering technology into practice.

#### **Profile - Bob Smith**

Bob Smith is a Project Manager at the European Software Institute in Bilbao, Spain where he is responsible for product management.

Prior to joining ESI he was a software engineering manager at GEC-Marconi Avionics where he gained over 12 years of experience in the development and management of embedded software systems in the avionics industry.

As a member of the SPICE Project he is the International Trials Co-ordinator of the SPICE Trials. In this role he is responsible for the planning and co-ordination of all trials activities to support the development of ISO 15504. He is an instructor of the ESI Introduction to SPICE Training course.

He is also one of four ESI staff who are SEI-qualified instructors of the Introduction to CMM. He has a degree in Computer Science and is a Chartered Engineer through membership of the British Computer Society.

EUROPEAN  
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# Assessment and Optimization of System Architectures: Experiences with Industrial Applications at Siemens



**Michael Gloger**

Siemens AG



**Stefan Jockusch**

Siemens AG



**Norbert Weber**

Siemens AG

## Abstract

*Durable and robust architectures of software systems are of crucial importance for successful software development and, therefore, need to be evaluated and optimised repeatedly at certain steps during the lifetime of a system.*

System Architecture Analysis (SAA) provides a method for analysing and optimising architectures. This contribution discusses the principles of SAA, explains its procedure, and illustrates how it can be embedded in the software development process. Finally, the experience from industrial applications at Siemens are summarised.

## Profile - Michael Gloger

Michael Gloger is a member of Corporate Technology of Siemens. As a consultant he has conducted architecture assessments, project reviews, process assessments, and architecture improvement efforts for major software development projects for Siemens operating divisions in Europe, USA and South America. Currently, he is working on procedures for controlling and standardising architectures of product lines, technology assessment methods and an assessment method for logistic processes.

Michael Gloger received his M.Sc. in computer science in 1987. Before joining Siemens he lead a research project for implementing programming environments for higher order functional languages with polymorphic type concepts at the Technical University of Darmstadt and received his Ph.D. in computer science in 1992.

## Profile- Stefan Jockusch

Stefan Jockusch is a consultant at Siemens Corporate Technology, where he concentrates on supporting the Siemens operating groups in improving software development processes and optimising system and software architectures.

His assignments have included analyses of technological risk and feasibility of large development projects, architectural evaluation of

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# EUROPEAN SEPG

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AMSTERDAM 16-19TH JUNE 1997

# SIEMENS

software systems and assessment of software development processes.

In recent cases, he supported the definition process of a system architectural framework for decentralised computing and communication. He is currently concerned with managing the transition from localised to transnational software development, involving fundamental changes of both the software structure and the development process. Presently, he assists a consumer electronics branch in executing this transition.

He earned a M.Sc. in Physics from the University of Gottingen and a Ph.D. in Computer Science from the University of Bielefeld and has a research background in speech recognition, neural networks, image processing and software engineering.

#### **Profile - Norbert Weber**

Norbert Weber received his diploma in mathematics (masters) from the Technical University Aachen, Germany, in 1992.

He is a member of Siemens' Corporate Technology Division in Munich and works as a consultant supporting Siemens' business units in the areas of software development processes and software architectures. He conducted many software process assessments as well as software architecture assessments, especially in the telecommunication and automation area. Currently, he is involved in a project which aims at harmonising heterogeneous software architectures of drive and control systems. The project goal is to reduce development costs and to provide a unified interface to the customer by defining a common software architecture for these systems.

His current research interests include the evaluation and optimisation of software architectures, processes for their evolutionary development, and suitable procedures for documenting them.

EUROPEAN  
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# Understanding and Improving your Suppliers



**Mick Bennett**  
British Telecom



**Chris Amos**  
British Telecom

## Abstract

To demonstrate and discuss how the in-house assessment process contributes to achieving BT's objectives of:

- Providing BT with more and better quality information on suppliers of software and software-rich systems thus helping BT gain an understanding of existing and potential software supplier's development capabilities, strengths and weaknesses - to use this information within BT's acquisition process to get the best from our strategic supplier relationships and to help minimise acquisition risks,
- Enabling BT and its suppliers to work together towards identified common goals,
- Identifying improvement opportunities.

## Profile - Mick Bennett

Mick has been with BT for over 32 years, working in Engineering, PSS development, Management Information and replacement Billing Systems. The past 17 years have been spent within the Software Supplier Assessment Team (SAT) assessing BT's suppliers of software and software-rich systems.

The principal role of the SAT is to assist BT's acquisition and contract process by identifying risks on both extant and proposed software and systems. This is primarily done by assessing its software suppliers using a stable and proven methodology.

Mick is co-owner, along with Chris Amos, of the team's assessment methodology/model and its application on projects, together with its associated toolset. He also has responsibility for maintaining the team's Phase and Post Implementation Review processes.

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**EUROPEAN  
SEPG**

GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM 16-19TH JUNE 1997



## Understanding and Improving your Suppliers Continued

### Profile - Chris Amos

Chris has worked within BT for nearly 20 years, the last 8 years as part of a group called the Software Supplier Assessment Team (SAT).

The role of the SAT is to assess BT's software suppliers as part of the acquisition process. The aim being to reduce the risk to BT of acquiring the software or system and/or identify risk on software already in use within BT.

Whilst on the group Chris has been responsible for the development and maintenance of the assessment methodology/model used, its application on projects and carrying out assessments.

16.4.97 Wednesday 10th June 1997

## Implementing and Enhancing a Quality Management System using TQM Principles and the CMM as a Framework



**Stefan Lytwyn**  
PanCredit Systems

### Abstract

At Provident Personal Credit a comparison of two large scale projects found that an investment of 530 days in process improvements resulted in a reduction of re-work by 1,000 weeks i.e. for every 1 day invested there was a return on investment of approximately 10 days.

By early 1996 PanCredit had implemented a Quality Management System based on the following Total Quality Management principles:

- customer requirements
- prevention not detection
- process control through TickIT (ISO9000) and the Capability Maturity Model
- leadership
- teamwork
- culture

During 1996 PanCredit were accredited with TickIT and conducted an assessment of its development process against the CMM.

This presentation will discuss the implementation issues, make comparisons between TickIT and CMM, highlight lessons learnt and the next steps.

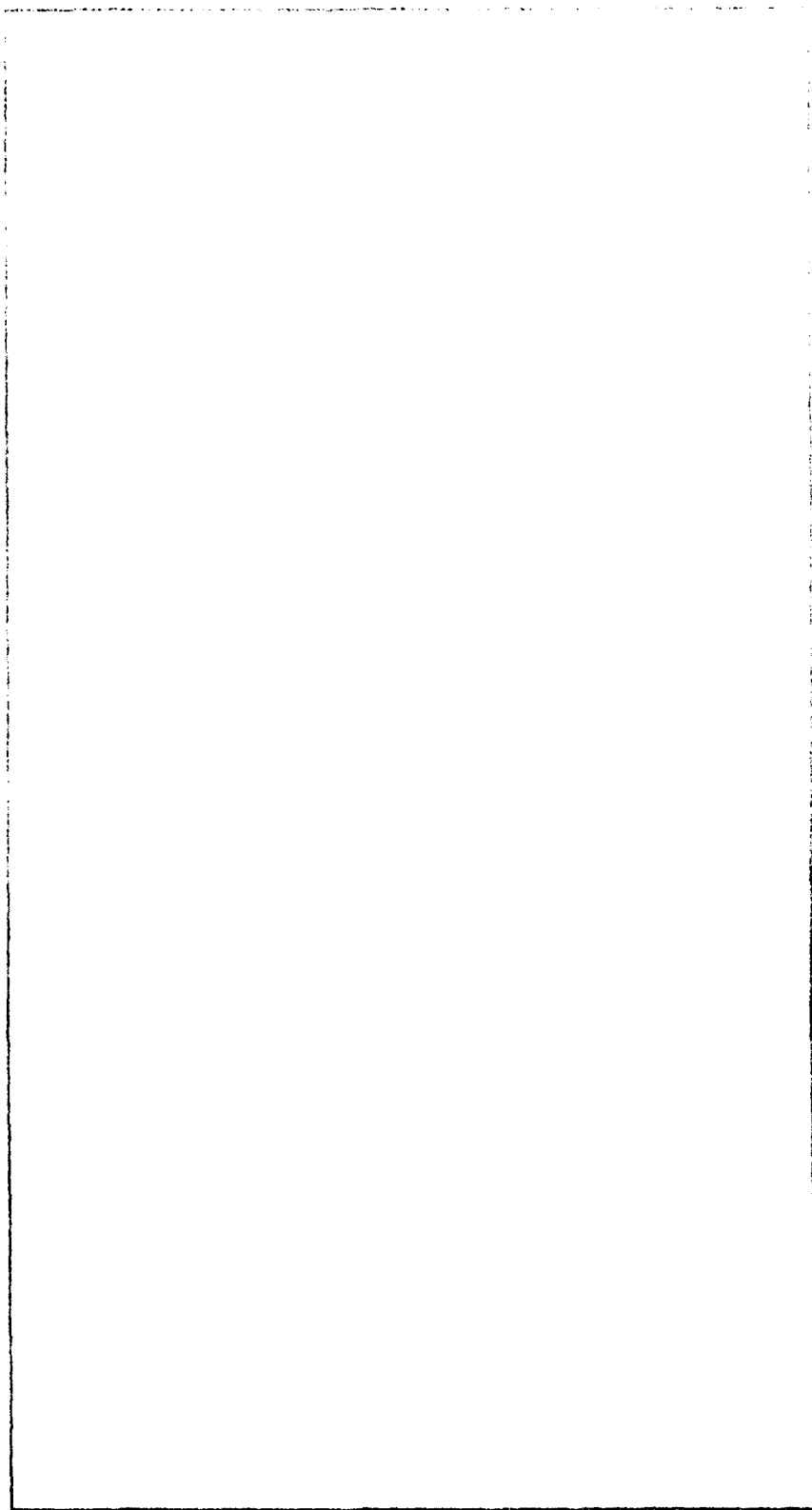
### Profile

Stefan Lytwyn graduated from Middlesex University in 1983. He has previously held roles as programmer, designer, analyst and project manager at Provident. In 1994, he gained an MBA from Bradford University with a thesis on the Capability Maturity Model using data from two projects at Provident. He was appointed Quality Manager at PanCredit in 1995.

In 1996, he presented on the topic of quality at BCS Software Quality Management in Cambridge, and implemented TickIT at PanCredit. In the same year he visited a Level 3 organisation in India and assessed the effectiveness of Indian Software development process using external consultancy.

His main interests are coaching and managing a U8 football team.





EUROPEAN  
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09.10 - Thursday 10th June 1997

## SEI Process 2000: Building on Strength



**Steve Cross**  
SEI

### Abstract

Steve Cross Ph.D., the Director of the SEI, will discuss the SEI Mission, with a brief background on the SEI and its focus on the software engineering trends with his vision of the future the years ahead. Topics will include the strategic plan and how it impacts and supports the software process improvement international community.

How might the SEI impact the new kinds of organisations in the 21<sup>st</sup> Century?

Several organisations are moving to the Independent Product Teams concept (IPT) and will be leveraging the totality of the SEI technical programmes and will be able to do so because of the reliance on our software process work.

An example of how an organisation that is IPT oriented might prosper operating as a product line organisation will be highlighted. Emphasising how an integrated approach with collaboration technologies, and interactive process guides supporting the IPT approach will be presented.

### Profile

Stephen E. Cross is the Director of the Software Engineering Institute. He was previously the Director of the Information Technology Center and Senior Research Scientist in the Robotics Institute, Carnegie Mellon University. Until August 1994, he was Deputy Director of the Software and Intelligent Systems Technology Office at the Defense Advanced Research Projects Agency (DARPA). Dr. Cross was a principal investigator on many advanced technology projects.

Dr. Cross has published over 50 papers on technology and the applications of advanced information processing technology. He is the Vice Chairman of the DARPA Information Science and Technology (ISAT) panel for 1997.

Dr. Cross received his Ph.D. from the University of Illinois in 1983, his MSEE from the Air Force Institute of Technology in 1977, and his BSEE from the University of Cincinnati in 1974. He is also a graduate of the National Defense University. He retired from the USAF in 1994.

**EUROPEAN  
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AMSTERDAM 16-19TH JUNE 1997



Software Engineering Institute



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# The Improvement Engine of the Ericsson Systems Software Initiative



**Jorma Mobrin**  
Ericsson



**Anders Wästerlid**  
Ericsson

## Abstract

The importance of software in the telecom industry continues to increase as a key enabling technology and in terms of the fraction of the total research and development. Ericsson launched the Ericsson Systems Software Initiative (ESSI) in late 1993 to ensure that it maximises the efficiency in software provisioning. ESSI covers about 40 Ericsson software design centres all over the world and involves more than 10,000 Ericsson software engineers. During 1996, the ESSI approach has proven to be very effective through improved quality and lead-time precision while lead-times have been continuously shortened. The approach includes:

- a powerful management system to deploy and monitor improvement actions,
- CMM assessments,
- the PQT measurement system,
- good practice dissemination.

Corporate actions cover areas like software competence, development process, execution of software projects and product architecture.

Based on the success of the ESSI improvement engine it will now be reused in other areas outside the market supply flow within Ericsson.

## Profile - Jorma Mobrin

Mr Mobrin was appointed Vice President Systems and Product Development at corporate level in 1994.

Prior to this Mr Mobrin held a position as Vice President and General Manager of the core AXE Switching R&D organisation. Mr Mobrin joined Ericsson in the late 60s and participated in many pioneering activities of the first generation of computer based telephone exchanges.

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**EUROPEAN  
SEPG**

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AMSTERDAM 16-19TH JUNE 1997

**ERICSSON** 

**Profile - Anders Wästerlid**

Mr Wästerlid was appointed programme manager of the corporate wide Ericsson System Software Initiative in 1995.

He is responsible for the ESSI programme including the following activities: Policy Deployment, CMM, PQT and the Identification, validation, transfer and implementation of good practices.

Prior to this Mr Wästerlid was General Manager of software support system development at Ellemtal, the joint development company owned by Telia and Ericsson. He has previous experience as line manager and project manager in the areas of System Management, SW design, System and SW support system development, High frequency IC and Optoelectronics development and manufacturing.

Mr Wästerlid has been with Ericsson since 1985 and holds an MSc in Electrical Engineering from the Swedish Royal Institute of Technology and MIT.

EUROPEAN  
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## Software Process Improvement Journey from Level 1 to Level 5



**John D. Vu**  
The Boeing  
Company

### Abstract

For business to thrive in the information age, managing software cost and achieving customer satisfaction are the key factors that will bring forth a competitive edge. The Boeing Company has been using the Capability Maturity Model (CMM) to improve its software process for many years; many of its organisations are operating at maturity levels 3, 4, and 5. This talk focuses on the process improvement journey, and the lessons learned from level 1 to level 5.

### Profile

John D. Vu is an Associate Technical Fellow with Software Engineering Research & Technology at The Boeing Company. John is currently leading Boeing company-wide software process improvement. John has over 20 years of experience in software development and project management.

Prior to joining Boeing, John worked at Terdyne, Litton Industries, and GTE. He has worked on the Navigation Systems for the Tomahawk Cruise Missile, F-15, AH-64, and designed Signal Processing Systems for many RADARs sites. He also worked on the development of the 777 at Boeing.

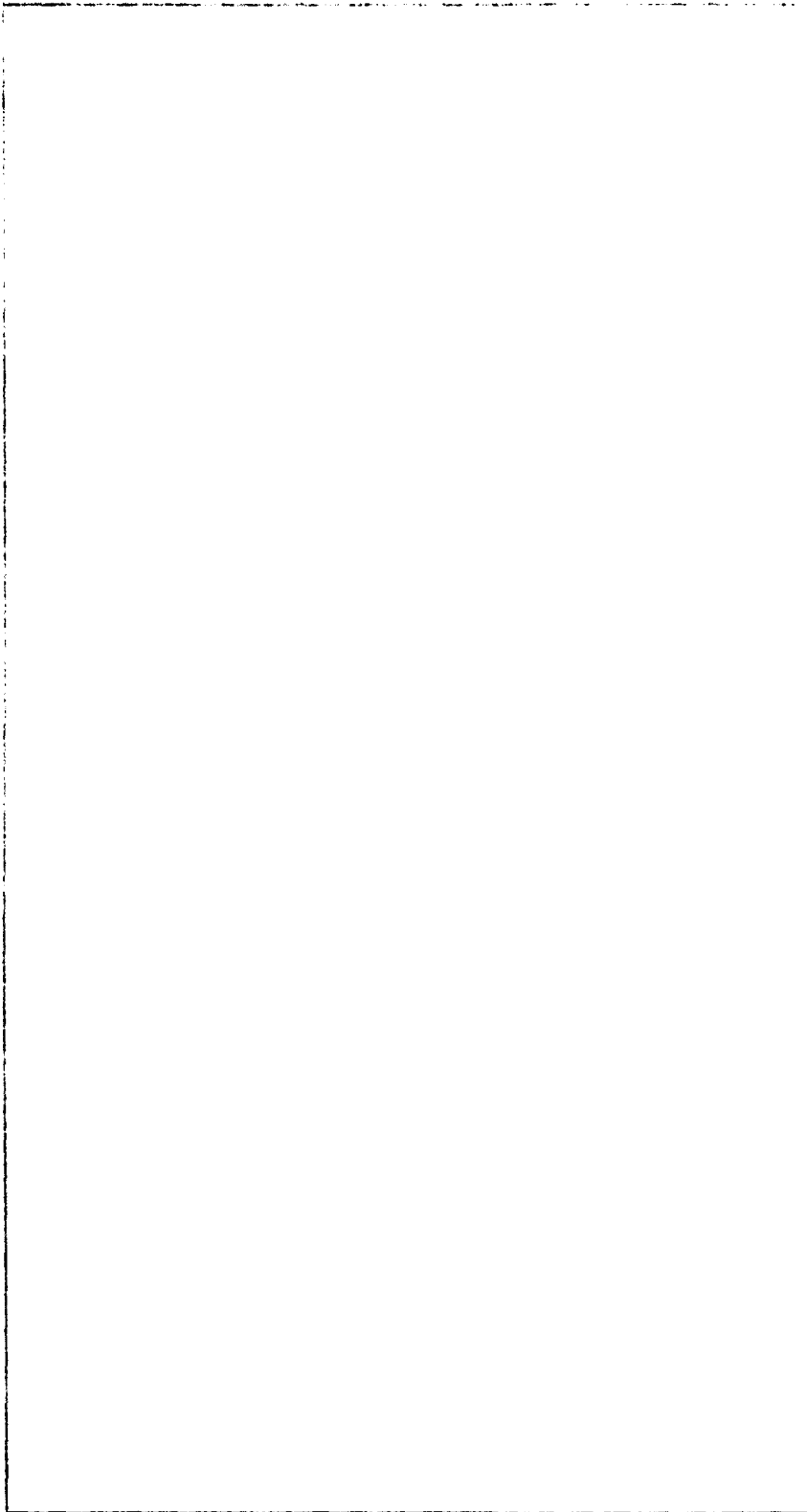
John is a visiting scientist at The Software Engineering Institute (SEI) at Carnegie Mellon University. He is a SEI authorised Lead Assessor, and was voted the "Most Active Lead Assessor" by the SEI in 1996. John is also a former member of the CMM Advisory Board. He is the co-author of *Boeing's Advanced Quality Systems (AQS)*: a system to establish customer-supplier relationship. John has published over 20 technical papers on software engineering disciplines and has presented many papers at various software engineering conferences worldwide.

John received his BS in Electrical Engineering at Ohio University and a MS in Computer Science at University of Nevada. John is also a member of the IEEE and ACM.

**EUROPEAN  
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GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM 16-19TH JUNE 1997

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# Highlights and Report Back from The Measurement Symposium



**Paul Goodman**  
TBL

## Abstract

Paul Goodman, Chairman of Tuesday's Measurement Symposium, will present highlights from the day's proceedings. Drawing from the variety of presentations, Paul will extract lessons learnt, latest thinking and current best practice.

## Profile

Paul Goodman is Technical Director of TOK B Limited (TBL), a management consultancy specialising in Software Process Improvement and Software Metrics. TBL is a founder member of the ESPI Foundation. Paul is the past Chairman of the UK Function Point Analysis User Group (now the UK Software Metrics Association) and a member of the ISO/IEC Functional Size Metrics Workgroup. Paul frequently presents at international conferences, has published numerous articles and technical papers dealing with SPI issues and is the author of 'Practical Implementation of Software Metrics' published by McGraw Hill.

Paul's experience of Software Metrics came from the development and implementation of programmes at a large UK government site and a leading multi-national telecommunications supplier. Following this Paul moved into consultancy and has supported many organisations in the development and implementation of Software Metrics programmes in all areas of the IT industry. Paul has participated in a number of European metrics initiatives including MUSE and METKIT.

Paul is also a member of the IDEAL project team. IDEAL is the SPI implementation model devised by the Software Engineering Institute, Pittsburgh.

**EUROPEAN  
SEPG**

GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM 16-19TH JUNE 1997







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# A Quarter Century of Software Process Improvement



**Terry R. Snyder**  
Hughes Aircraft  
Company

## Abstract

Hughes has vigorously pursued software process improvement for over a quarter century. This presentation tells that story, beginning with research and training in the early 1970s and the attainment of what was effectively "Level 2" before it was defined. Hughes was an early adopter of the SEI CMM, was formally Level 2 in 1987, and in January of 1991 was the first organisation to attain Level 3 in an SEI-led assessment. Over time, the use of the mature processes has spread to 4000 Hughes software engineers, with plans in the works to spread the CMM model to systems engineering and other disciplines.

## Profile

Terry R. Snyder, with more than 35 years of management and programming experience of software for large-scale, real-time computer systems, was appointed corporate vice president of Hughes Electronics in December 1996. In addition, Snyder remains vice president of systems and software engineering for Hughes Aircraft Company to which he was appointed in October 1994.

As vice president, Snyder is responsible for institutionalising a common set of systems and software processes, methods, metrics and tools to increase reuse, reduce cycle time and cost, and increase employee mobility throughout Hughes.

Prior to his current assignment, Snyder spent a significant part of his time ensuring that over one million lines of high quality software would be produced in time to meet a key milestone on the Peace Shield Program for Saudi Arabia. The USAF has recognised this as one of the most successful programs ever and is adopting many of the Hughes processes and metrics as standard.

From 1989 to 1993, Snyder was manager of the software engineering division responsible for supporting Hughes Aircraft Company with high quality software. During this period his division was a recognised leader in software development as indicated by its high rating in software process maturity from the Software Engineering Institute.

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**EUROPEAN  
SEPG**

GRAND HOTEL KRASNAPOLSKY  
AMSTERDAM 16-19TH JUNE 1997



Snyder graduated from Pennsylvania State University in 1960 with a bachelor of science degree in mathematics, and completed the UCLA Executive Management Program in 1978. Snyder spent six years as a senior research engineer for the Autonetics Division of North American Rockwell, working on the Minuteman and Advanced Minuteman programs. He joined Hughes Aircraft Company in 1966.

Snyder is chairman of the company's Systems Software Engineering Council. As an active member of the software technology world outside of Hughes, Snyder is an advisory board member of the Software Engineering Institute, served as vice chairman of the Board of Directors for the Software Productivity Consortium and was chairman of the Embedded Computer Software Committee for the Aerospace Industries Association. He is Hughes' corporate key executive for California State University, Fullerton and Hughes' representative to the University of California, Irvine, serving on the executive committee of Irvine Research Unit in Software (IRUS).

Snyder was born on December 27<sup>th</sup>, 1938, in Allentown, Pennsylvania, and lives in Tustin, California.

EUROPEAN  
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## Continuous Quality Improvement in Software Development on the Basis of Measurement and Assessment



**Holger Günther**  
Allianz Life

### Abstract

In 1993, in co-operation with IESE, Allianz Life established a programme for the systematic improvement of software quality. Its cornerstone was the Quality Improvement Paradigm (QIP), a modification of Total Quality Management with special emphasis on software development. The QIP is closely related to a goal-oriented approach of software measurement and an organisational infrastructure for capitalising on and reusing life cycle experience.

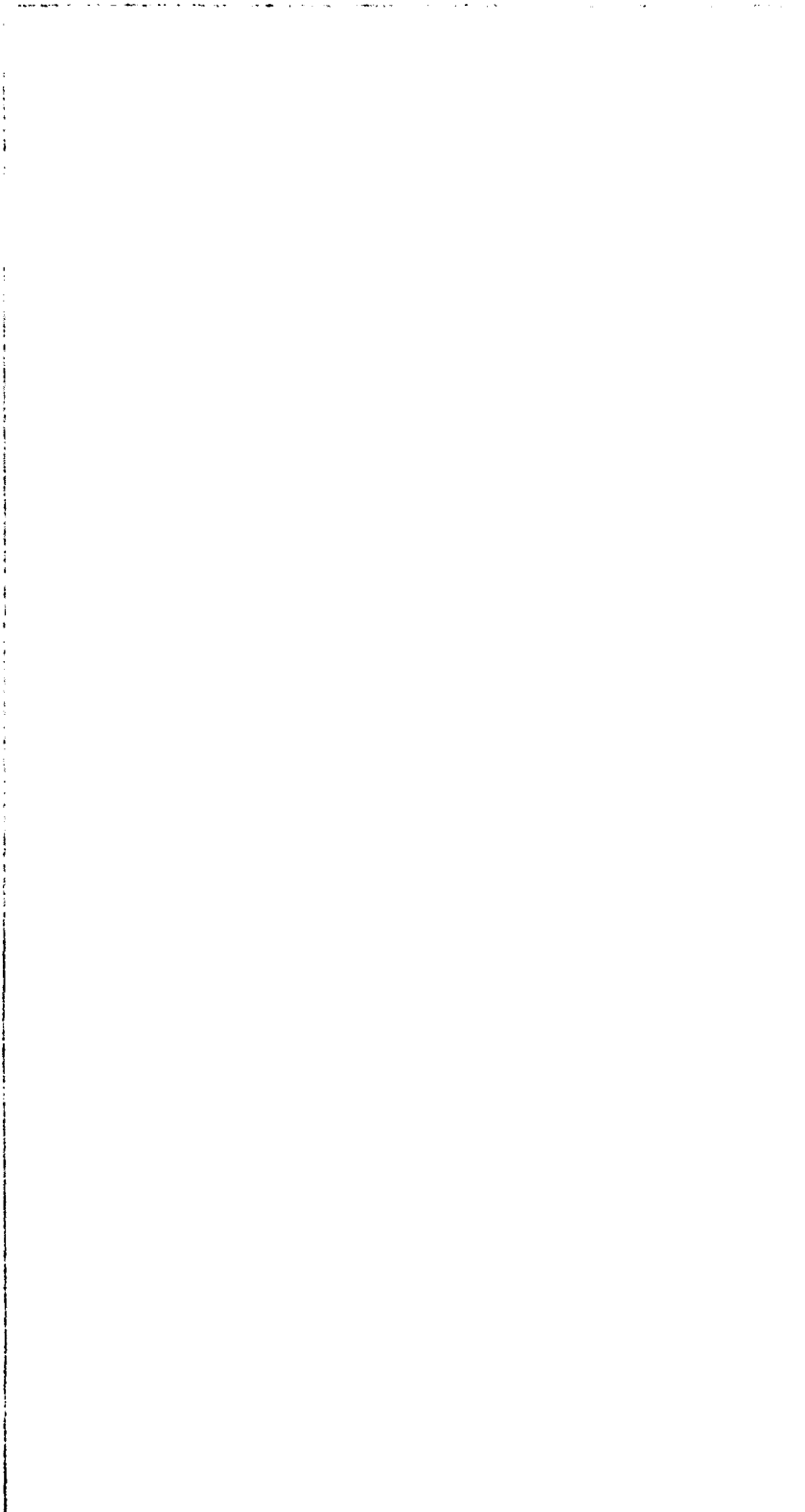
The presentation will explain why this approach was chosen, the results which have been achieved, and the lessons learnt. Less emphasis is put on the theoretical foundation.

### Profile

Mr Günther presently holds the position of department head for Software Engineering at ALLIANZ Life in Stuttgart, Germany. ALLIANZ Life, belonging to the international ALLIANZ Group, is Germany's biggest life insurer. Since 1993 Mr. Günther has been working in establishing the Quality Improvement Program to be used in the Application Development Environment, which consists of more than 300 developers.

Before coming to ALLIANZ he was with MERCEDES BENZ for 11 years, where he held the position of department head 'Methods, Dataplaning and Software-Technology'.

He received a BS and MS in economic engineering from the University of Karlsruhe, Germany.



## Overcoming Resistance to Change to Become a True 'Learning Organisation'



**Alistair Watters**

Warwick Consulting  
Ltd

### Abstract

All change initiatives suffer from resistance that obstructs progress, saps morale and drains valuable resources at significant cost to the organisation. The tools of Recursive Benchmarking and Human Process Metrics help to track, monitor and influence the progress of change. They can also be used as 'vehicles' for implementing change, using the principles and practices of Organisational and Individual learning.

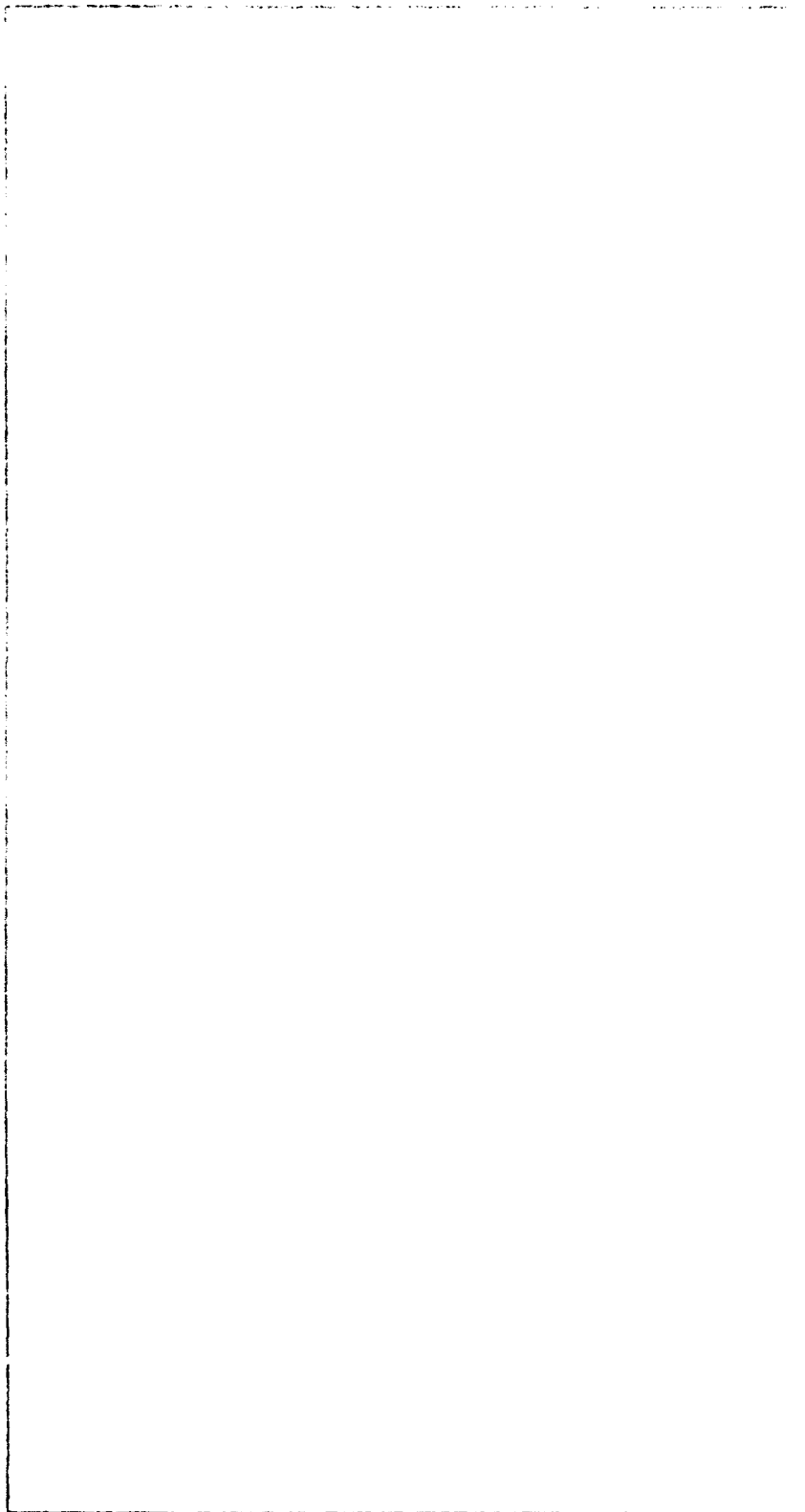
### Profile

Following his medical training, Alistair pursued a career in the pharmaceuticals industry where he held senior management and director positions. In 1989 he moved into Management Consultancy and specialised in:

- Organisational Development and Change;
- Business Process Improvement;
- Change Management;
- Organisational Design and Strategic Development; and
- Organisational Learning.

Alistair specialises in the development and implementation of organisational change with particular reference to the cognitive and behavioural shifts required to 'make change work'. He also specialises in individual and organisational performance competency and management.

Alistair has pioneered the development of metric tools and protocols to audit and calculate cost-benefits from training and consultancy (including 'soft' interventions). He is currently developing interventions for implementing change covertly and 'actively' reducing resistance.



EUROPEAN  
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## A Co-ordinated Approach to Identifying Software Development Risk in MoD Projects



**Llewelyn Jones**  
MoD



**John Hamilton**  
DERA

### Abstract

The UK MoD is one of Europe's largest procurers of complex software based systems. The MoD Procurement Executive has recently selected the SCE method for use during pre-contract award evaluations. The Chief of Defence Procurement has now formally promulgated this policy, and MoD(PE) are working closely with the Defence Evaluation and Research Agency to promote a co-ordinated approach to identifying software development risk in MoD projects. This paper reviews the background to the problem, describes how the SCE Method was selected and enhanced, touches upon the anticipated benefits to MoD and Industry, and outlines how MoD(PE) intend to use SCEs.

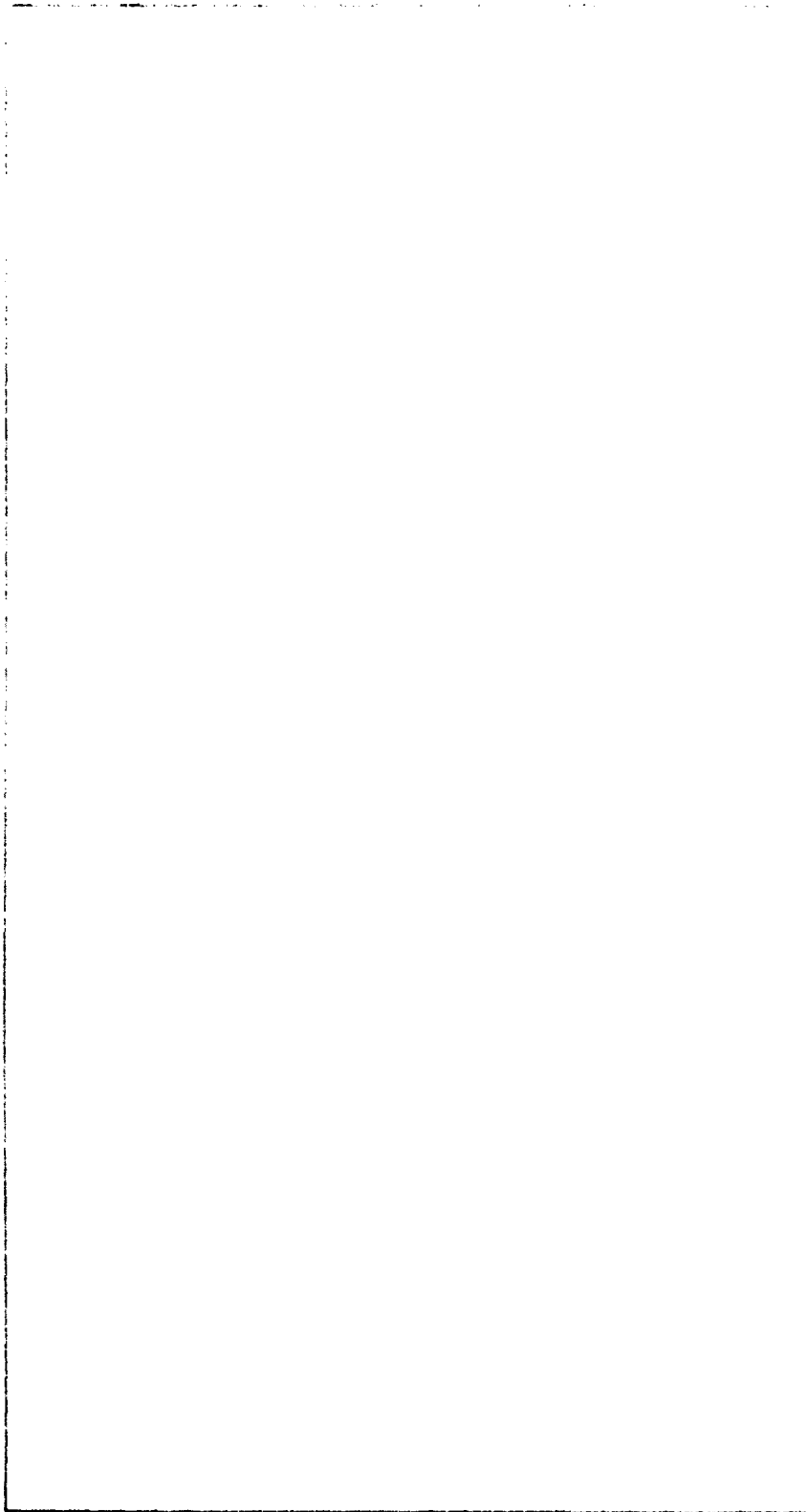
### Profile - Llewelyn Jones

Llewelyn Jones is a member of the Ministry of Defence Software Intensive Projects Improvement Programme team; a MoD initiative for investigating and developing techniques to improve MoD's acquisition of software based systems. Amongst the many tasks undertaken within the initiative was the introduction of SEI's SCE Method as a contributing technique used to determine supplier capability during the contractor selection process. Having established the use of SCE within defence equipment procurement, one of Llewelyn's responsibilities is overseeing the application of SCE in MoD.

### Profile - John Hamilton

John Hamilton is SEPG Manager at the DERA Systems and Software Engineering Centre. He is a Principal Scientist with a first class honours degree in Process Control and a Masters in Computer Science. John has extensive operational background in defence-oriented software intensive systems and over 15 years software engineering experience. He is a qualified TickIT auditor, and technical editor for Part 8 of ISO 15504, the emerging SPICE standard for Software Process Assessment. John is an associate lecturer with the UK Open University Faculty of Mathematics and Computing and an internationally recognised authority on Software capability determination. He has recently been involved in the transition of CMM into the UK and has participated in a number of SCEs on behalf of the Ministry of Defence.





EUROPEAN  
SEPG

# Five Years' Experience with SPI: Lessons Learnt



**Gilles des Rochettes**  
Thomson-CSF

## Abstract

The Thomson-CSF context:

THOMSON-CSF is an international company whose business covers professional electronics in civil and military systems. Regarding Software Process Improvement (SPI), our company has adopted the SEI methodology based on the CMM and started with five assessments (former SPA method) in 1992.

Concurrently with this SPI programme, other PI programmes were conducted: a corporate SW training institute, created in 1987; creation of a SW development Reference System in 1990, mainly based on the DoD 2167-A; availability of a corporate CASE in 1991; in 1993, stabilisation of the corporate method for managing projects and programmes, creation of a system engineering method and initialisation of the management of the SW population.

The Thomson-CSF maturity profile:

Thomson-CSF has presently level 2 and level 3 organisations; the level 2 obtained is generally a level 2+, explaining the average time to reach it (35 months); getting to level 3 is planned to be quicker than the SEI statistics (first actual result was 18 months).

SPI at the corporate level:

In order to support each of the independant Enterprises of the company, two sub-programmes have been organised at the corporate level:

- a "level-2" corporate programme whose objective was to assess which were the best practices;
- already in place within the company; some level 3 themes were included, such as peer-reviews;
- a "level-3" corporate programme whose objective was to stimulate each of the advanced.

Enterprises for four compulsory steps (understanding, preparing, tooling if necessary and disseminating) for one of the level 3 Key Process Area; their

*Continued overleaf*

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AMSTERDAM 16-19TH JUNE 1997

 **THOMSON-CSF**

assigned responsibilities was to provide the other Enterprises with a set of artifacts for each steps for the KPA they were in charge of.

**Experience and assets sharing:**

An internal SPIN meets every month. A company assets catalogue is regularly enriched from diverse sources (assessments...). A corporate Standard Reference System composed of policies, process definitions and guidelines is available for each Enterprise on an internal server.

**Improvement results:**

Two kind of results are visible: managers recognise a better visibility on the SW development process and baselines are better stabilised; some key figures shows that predictability has improved on costs and schedule, resulting in a notable Return On Investment.

**Profile**

Gilles des Rochettes is presently the SPI manager within the Software Engineering CET (Common Efficiency Team) of THOMSON-CSF. The scope of his responsibility include the assessment programme based on the SEI-CMM1, the corporate improvement programmes, and the corporate assets awareness; with his team he acts as a support to the SEPG of each THOMSON-CSF Enterprise or Business Unit. He is presently an SEI authorised lead assessor.

Gilles des Rochettes was previously head of a system engineering department on C2-I for ground-to-air weapon systems in a THOMSON-CSF Business Unit. Concurrently he was a key participant in the design of the THOMSON-CSF system engineering methodology. He is presently involved in the adoption of the SEI-CMM by the company. Prior to that he was head of a software development department in the same business domain.

Gilles des Rochettes graduated as an electronic engineer from the "Institut Supérieur d'Electronique du Nord". His first position was on FORTRAN simulations of control systems for missile weapon systems. He gradually became head of teams dealing with both algorithm simulations and real time embedded software products.

EUROPEAN  
SEPG

# From Chaos to Control



**Debbie Hellmann**

Digital



**Alf Pilgrim**

Digital

## **Abstract**

This presentation describes the software process improvement efforts undertaken by the Integrated Office Services Group (IOSG) at Digital Equipment Corporation. It describes how the efficiency of the software process was improved, the role of the SEI's Capability Maturity Model (CMM) and assessment method in the effort, and the benefits achieved by implementing CMM Level 2 and Level 3 practices.

## **Profile - Debbie Hellmann**

Debbie Hellmann is the Quality Manager for the Integrated Office Services Engineering group (IOSG) based in Reading, England. The group consists of approximately 60 engineering staff responsible for developing groupware software products to facilitate enterprise-wide co-operative working.

Debbie has 13 years experience in the IT industry obtained in Customer Service and Engineering. She is responsible for managing the Testing effort for all of the various products being developed within the group and also for managing the process improvement effort. Debbie recently completed a 2 year project preparing the group to undergo their second SEI assessment. The CMM-Based Appraisal for Internal Process Improvement took place in May '96, and the group achieved their goal of reaching Level 3.

## **Profile - Alf Pilgrim**

Dr Alfred Pilgrim is the Engineering Manager responsible for several of Digital's Office and Messaging products, all developed at Digital's UK Headquarters in Reading, Berkshire. Previously, Alf was responsible for the Systems Integration and Test functions of the organisation and in this role instituted a continuous improvement programme based on the SEI Capability Maturity Model. To date, this programme has enabled the organisation to achieve level 3 of the CMM.

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# The Complementary Aspects of Process Capability and Re-Use Capability



**Sergio Bandinelli**

European Software  
Institute



**Álvaro Sanz  
Monasterio**

European Software  
Institute

## Abstract

The adoption of reuse practices in an organisation need to be addressed in the context of process improvement. However, there is no established explicit connection between software reuse adoption and general process improvement activities. We discuss the definition and preliminary experiences with an assessment model that integrates the complementary aspects of reuse and process capability, facilitating the introduction of reuse as part of process improvement actions.

## Profile - Sergio Bandinelli

Sergio Bandinelli received his Doctorate in Computer Science from ESLAI, University of Luján (Argentina) in 1989 and his PhD in Software Engineering from Politecnico di Milano (Italy) in 1995. From 1991 to 1995 he was a researcher at CEFRIEL, an IT applied research and educational institute, and teaching instructor at Politecnico di Milano. Since 1995 he has been a member of the technical staff at ESI (European Software Institute) in Bilbao (Spain), where he is leading projects in the area of software reuse.

Sergio Bandinelli is author of several scientific publications in international journals and conference proceedings. His interests are in process modelling, process improvement, process technologies and software reuse.

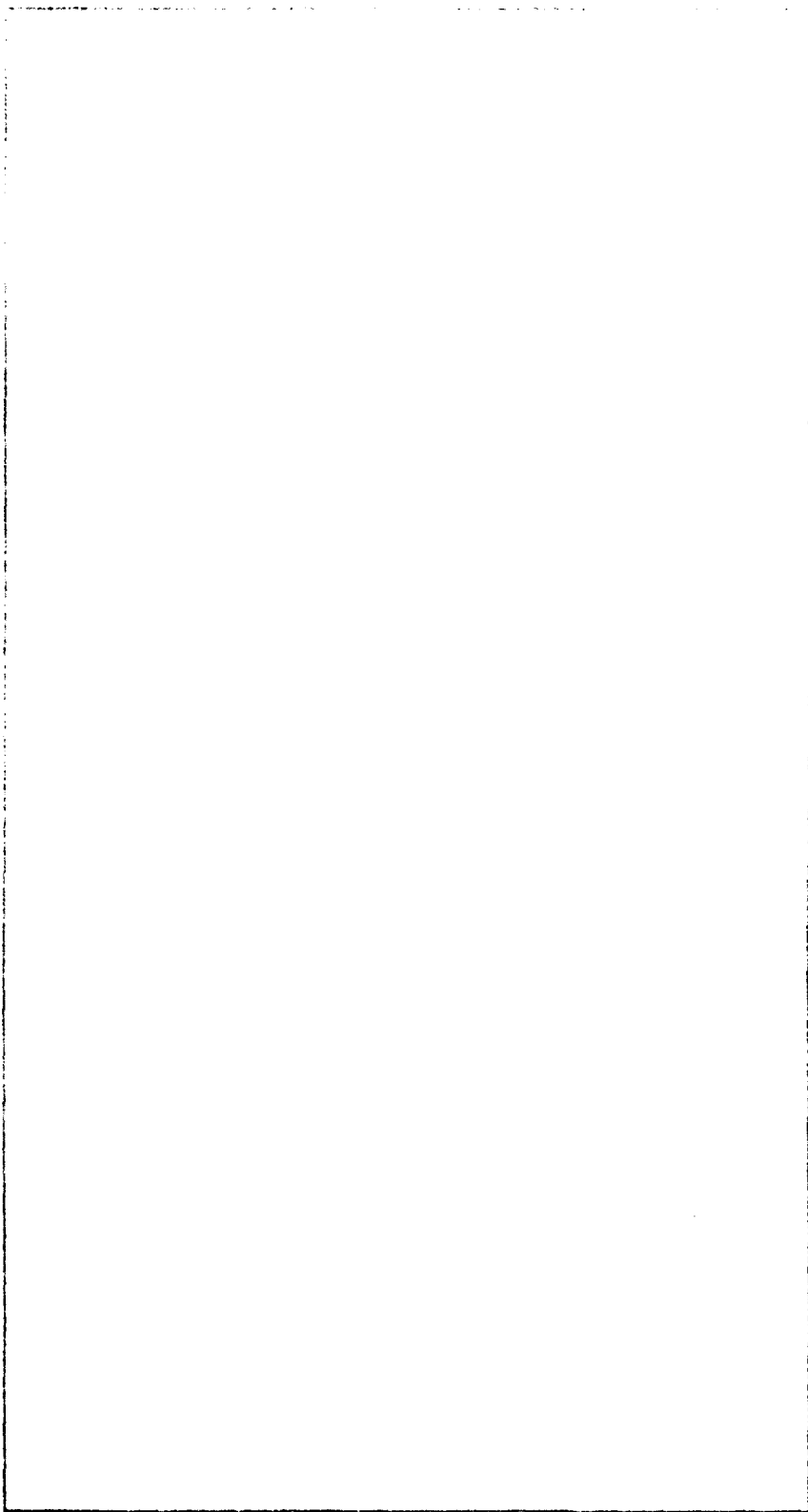
## Profile - Álvaro Sanz Monasterio

Álvaro Sanz is presently with the ESI (European Software Institute), where he working as a software engineer in the Process Improvement Area. His work centres primarily on reuse assessment and improvement. His research interests include specific domain analysis and product - line development, as well as visual programming. He received his Computer Science Degree from Deusto University in Bilbao and, before joining the ESI, he worked as a computer programming teacher for the University of the Basque Country.

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SEPG**

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 **ESI** European  
Software  
Institute



EUROPEAN  
SEPG

# Software Best Practice: Benefits to the Business



**Alejandro Moya**

European  
Commission

## Abstract

The objective is to show the quantifiable business benefits to be gained from adopting Software Best Practice.

This will be illustrated by analysing and showing the individual experiences of 15 organisations participating in Process Improvement Experiments.

The underlying message is the key importance of adopting Best Practices and the evidence that the key drivers towards success are: "business needs and customer satisfaction".

## Profile

1990 European Commission. Project Officer DG III/F ESPRIT (industrial co-operation programme in Information Technologies). Responsible for:

- Dissemination actions in the Software Best Practice initiative of the European Commission: ESSI.
- A portfolio of Process Improvement Experiments, R&D projects and Trial Applications in Software Technologies.
- Design, co-ordination and/or negotiation of actions involving industry and public administrations such as:

PASO. Common Software action with the Spanish Ministry of Industry.

Industrial Advisory Panels. Task force to identify user industry needs. Involving top management from the industry and Commission DG's.

Banking Interest Group.

X IT World Congress: involving the participation of Mr. Bangemann and a Commission stand demonstrating Information Society projects and Process Improvement Experiments.

- Co-ordination of the technology transfer, promotion of the innovation and exploitation of the results of the programme.

*Continued overleaf*

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1979-89 ENTEL (Spanish Information Systems Services company -more than 1000 employees in 1989). Head of department. Responsible for:

- Management of the portfolio of clients and projects.
- Economic and commercial management (revenues of 300 Mpts in 1989) Commercial responsibilities and contract negotiation with clients.

Major clients were Telefónica, Repsol, Renault, European Space Agency. Typical projects were management information systems, decision support systems, database front-ends, etc.

Previous activities as project manager, consultant and systems engineer in domains such as: Informatic Plans, Office Automation, Local Area Networks and Business Systems.

These activities were undertaken for a large variety of clients from different sectors like: CAMPSA, CajaMadrid, Ministry of defence, Barcelona Olympics, etc.

1977-79 Universidad Politécnica de Madrid. Lecturer and research activities.

#### ACADEMIC:

1977 Industrial Engineer. Universidad Politécnica de Madrid.

1993 Financial Accounting. Universidad Politécnica de Madrid.

Marketing. Universidad Politécnica de Madrid.

EUROPEAN  
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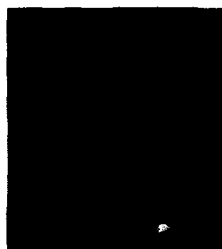
## CLOSING PANEL



Moderator:

**Colin Tully**

Colin Tully  
Associates



**Keith Jackson**

TBL



**Hans-Jürgen Kugler**

European Software  
Institute



**Chris Lerner**

Lloyds TSB Group



**Alejandro Moya**

European Commission



**Bill Peterson**

SEI

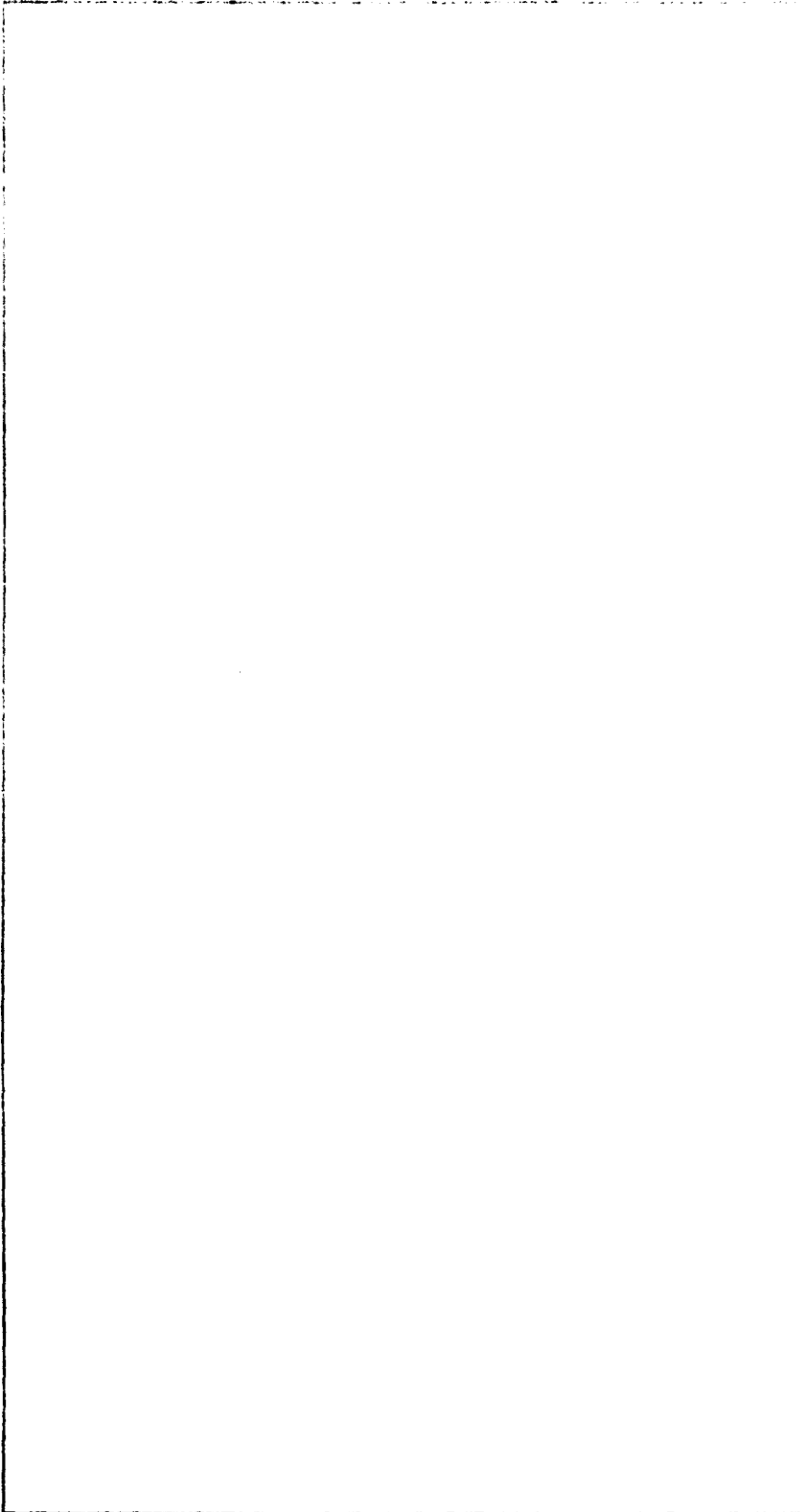


**Hans Sassenburg**

Netherlands SPIN  
(SPIDER)

SEPG

120



EUROPEAN  
SEPG

# Exhibitors

**aimware**

**Continuus Software Corp. / QA Systems**

**European Software Institute**

**European Software Process Improvement Foundation**

**Guild of Independent Function Point Analysts**

**IBM Global Services**

**ICT AUTOMATISERING B.V.**

**Institute for Software Process Improvement Inc.**

**james martin + co**

**Origin Quality Management Competence Center**

**Process Professional**

**Q-LABS**

**QSM Metric Consult**

**Software Engineering Institute**

**Software Process Improvement Network (UK)**

**Software Productivity Research**

**Survive! The Business Continuity Group**

**The Bootstrap Institute**

**TBL**



aimware develops Lotus Notes-based process tools for software development teams designed to help organisations develop better software faster and at lower cost. aimware are currently developing an internet / intranet version also.

aimware's main product is *aimspi* (Software Process Implementation), a suite of software products which help software teams not only document how they operate but actually carry out the work as described. This delivers:

- visibility to senior managers
- control to project managers
- ease of use through automation for development engineers.

The tool manages the documentation and workflows of key software development processes such as Process Management, Project Management, Test Management, Requirements Management, Review Management, Defect Management etc.

*aimspi* consists of the following products: aimfirst, aim9001/TickIT, aimCMM2, aimstep, aimCMM3, and aimCMM4.

Unlike traditional documentation tools, *aimspi* also helps organisations achieve international recognition with standards such as the SEI SW-CMM and ISO 9001/TickIT.

The actual CMM model and the associated maturity questionnaire are delivered in an easy to use fashion in the software (in the Standardware module).

aimware's quick success was acknowledged recently by Lotus Corporation who presented aimware with two Lotus Beacon Awards at both its 1997 world-wide and European Lotusphere events.

A vote of confidence in aimware's process tools is the fact that aimware use their own software, and actually achieved ISO9001/TickIT certification within 5 months of being established (believed to be a world record!) using the aim9001 product from their *aimspi* software range.

*aimspi* was built specifically to support advancement through CMM maturity levels.

aimware has recently been upgraded to the top tier status of "Premium" Lotus Notes Business Partner. Premium Partner status is awarded to organizations which demonstrate the highest level of commitment to Lotus and Lotus technologies.

Now working together is much easier!

#### **aimware**

Technology Centre, Mervue, Galway, Ireland  
tel: +353 91 771626  
fax: +353 91 755635

contact: Éamonn McGuinness or  
Sinead O'Shaughnessy

#### **US Subsidiary**

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fax: 617 547 1431

contact: Neil White  
email: [info@aimware.com](mailto:info@aimware.com)  
web: <http://www.aimware.com>



## QA Systems - "Make Software Quality Happen"

QA Systems specialise in Software Quality Management. Our aim is to contribute to the profitability of our customers by offering a total solution for improving the quality of both the software engineering process as well as the software product. We realise this by working from our SPIQS™ methodology and associating expertise in the area of software engineering with quality management, latest technology and professional services.

**SPIQS™** - Solution for a Practical Implementation of a Quality System.

- Based on TQM.
- Integrates with CMM, ISO9001, TickIT, ITIL.
- Covering risk analysis, Quality plans, procedures, standards, software-product and process assessments, implementations.

### TECHNOLOGY

We represent Programming Research Ltd. and **Continuus Software Corp.**

- Tools for Software Quality Control.
- Systems for Software Change Management.

## Continuus Software Corp. - "Change is the only constant. Manage it"

Headquartered in Irvine, California, Continuus Software Corporation is the fastest-growing provider of change management solutions for software development. The company develops and markets the Continuus Change Management Suite, a comprehensive, workflow-oriented solution for managing change in software development projects.

The Continuus approach establishes a workflow model for ongoing response to the onslaught of software change, providing a way to:

- efficiently coordinate the activities of individual developers working in teams
- create optimal independence that liberates developers and makes them more productive
- enable time-saving concurrent development
- reduce the frequency and consequences of human error
- provide security and rapid troubleshooting

The Continuus Change Management Suite offers all the necessary components for:

- Version Control/ Object Management
- Work Area Management
- Build Management
- Parallel Development Support
- Workflow Management
- Integrated Change and Problem Tracking
- Distributed Change Management

#### Continuus Software Ltd.

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**ESI****European  
Software  
Institute**

The European Software Institute is a major industrial initiative founded under the auspices of the European Commission and the Basque Government to promote and disseminate advanced best practice in software engineering in order to encourage excellence in European industry.

From the beginning, the Institute has brought together software users and suppliers through membership agreements, helping them to identify the most appropriate practice for their organisation and how to achieve continuous improvement of the software process.

## Improving your chances of a successful SPI programme...

If you are evaluating, initiating or continuing your commitment to software process improvement, you probably appreciate the value of sharing your experiences with other organisations. You can be sure that you are not alone - the issues before you are also being faced by someone else. The number of organisations committing to SPI programmes continues to rise within Europe and around the world, and there are many lessons to be learnt from them.

***The ESPI Foundation can put you in touch with these organisations and provide a wide range of information to keep you abreast of the new developments, trends and experiences world-wide. With ESPI Foundation at your side, you have a partner dedicated to helping you succeed.***

## ...Supporting your business objectives

The ESPI Foundation was created to represent the business requirement for SPI - improving productivity, optimising software quality and reducing rework. Independent of any supplier, method or approach, we have an interest in all. Our experience is that, whichever approach you take, the issues you face are the same. As a member of the ESPI Foundation, you will have access to news and updates from all sections of the SPI community.

### At the forefront of new developments

You benefit from our close working relationship with the organisations at the cutting edge of the SPI movement - the Software Engineering Institute (SEI), the European Software Institute (ESI) and Software Process Improvement Networks (SPINs) throughout Europe. We are continually examining new, joint initiatives that will serve the European IT community.

### Membership Services

**European SEPG conference:** the first, held in 1996, quickly became the most talked about IT conference in Europe. This is the largest European gathering of SPI practicing organisations at all levels, from IT director to practitioner. With a rich programme covering business issues, people issues, new technology and practical implementation issues, there is something for everyone.

**SEPGs around Europe:** a two-day series of conferences that integrate the European event with the experience and knowledge of organisations in each country.

**Seminars:** learn about new (and established) techniques from world-class experts that help ensure your SPI efforts succeed.

**Executive Briefings:** discuss the key issues that concern you with other executive managers. This business lunch closes with lively open debate between the panellists.

**Exchange Newsletter:** Monthly, high-level news that is easy to assimilate, taking less of your time to keep up to date

**ESPI Library:** A growing collection of reference papers that describe SPI models, tools, case studies, implementation techniques and much more.

**ESPI Book List:** The leading titles are reviewed - buy them from ESPI, some at a discount.

**Web Site:** A continuously updated information service, with a members-only section offering Exchange on-line, a comprehensive list of all European IT events, supplier's listings, download facility for all the papers in the ESPI Library... and much more.



## **The Guild of Independent Function Point Analysts Ltd**

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### **If you need independent, expert advice or assistance with**

- sizing software, eg by counting function points, of individual projects and of whole portfolios
- measuring performance (productivity, speed of delivery and quality) in software development, maintenance and acquisition activities, and comparing against industry norms
- producing estimates for new projects
- evaluating application portfolio assets
- training and general awareness education in software measurement, via public and private courses
- establishing software metrics programmes
- establishing appropriate means of ensuring Value for Money in software outsourcing and acquisition contracts
- helping resolve software supplier/buyer disputes
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**For further information please contact:**

**Our Office:** GIFPA Ltd., St Clare's, Mill Hill, Edenbridge, Kent TN8 5DQ, England  
Tel: +44 (0) 1732 863 760 Fax: +44 (0) 1732 864 996  
E-mail: 100340.523@compuserve.com

**Charles Symons at European SEPG '97 at the GIFPA stand in the Volmer Room, or via**  
Tel: +44 (0) 1737 763 674 Fax: +44 (0) 1737 761 166  
E-mail: 100561.1433@compuserve.com



## **IBM Global Services**

### **Preparing Your Business For The Next Century**

In line with the recent worldwide announcement of a new IBM Services strategy, a single "IBM Global Services" brand and a simplified business structure and industry-focused go-to-market model, IBM Europe has been realigning its Services organisation.

IBM Global Services consist today of three Services segments:

- Professional Services, including Consulting & Systems Integration, Education & Training and Managed Operations including Outsourcing.
- Product Support Services, with responsibility for products and systems-related service offerings.
- Network Services, including the IBM Global Network and additional network service offerings, managed globally.

IBM Professional Services offers a wide range of service solutions within the area of Software Process Improvement. IBM has a well proven methodology for Software Process Improvement, developed by experienced practitioners and performed by experienced consultants.

The most well known service offering focusing on Process Improvement and based on IBM's consulting methodology is the European Software application Development Benchmark which, unlike others, is focused on both practice and performance and how that correlates.

The benchmark has been performed on more than 500 companies and has recently gone through an update to keep up with the demands of the market. It is now possible to benchmark not only your performance and capabilities, but to benchmark from the point of a critical issue, like year 2000. The benchmark shows how well a company's year 2000 critical processes are positioned to deal with year 2000.

Year 2000 is a very critical issue for a company's survival. IBM Global Services can offer a wide range of services, from a prestudy by experienced consultants to a full conversion. The prestudy is based on the principles of Software Process Improvement. The IT processes which are critical are assessed within the environment they exist. This involves a process maturity process and a risk evaluation with resulting recommendations to improve processes and to reduce the risk ensuring that the year 2000 problem is solved within the limited time and resources available.

**Contact:** Charlotte Pederson, IBM Consulting Group Application Development Effectiveness  
Service Line Leader  
Nymoelevvej 91, DK-2800 Lyngby, Denmark  
Tel: +45 45 23 33 96 Fax: +45 45 87 44 38 Internet: chap@dk.ibm.com

Internet for Year 2000: <http://www.software.ibm.com/year2000>

Internet for benchmark: <http://www.europe.ibm.com/software/benchmk>

# ICT

NIEUWE WEGEN IN  
AUTOMATISERING

With around 500 employees, ICT is one of the largest independent Dutch software developers. Begun in 1978 in a complex world of industrial and technical-scientific automation, ICT has grown into the authority in the area of product software and automated processes. A software enterprise in which scarce expertise is not scarce, where product development and process automation is the environment in which the most advanced technological developments determine the daily routine. To maintain and expand this expertise, ICT has Competence Centres. One of them is the

## COMPETENCE CENTRE SOFTWARE PROCESS IMPROVEMENT

For many years ICT has built knowledge and expertise in the field of Software Process Improvement. The SPI Competence Centre of ICT has a substantial knowledge base, participates in several international projects (like SPICE), and has close relations with the Software Engineering Institute (SEI: Pittsburgh, USA), the European Software Institute (ESI: Bilbao/Spain), and the European Software Process Improvement Foundation (ESPI: UK). The Competence Centre is the home base of the SPI Consultants and enables them to keep up to date and to exchange experiences.

The Competence Centre SPI offers several services:

### Assessments

Assessments are used to make strength/weakness analyses of particular aspects within an organisation. Considering these analyses, an objective improvement plan can then be set up so that attention is focused on the most effective improvement areas. ICT has a number of assessors and uses CMM and SPICE as reference models. Besides the software processes, the areas of product life cycle, organisation, technology, and infrastructure are included in the assessment.

### Consultancy

Many organisations have insufficient knowledge and experience to initiate and execute improvement programmes. Often they prefer external assistance. ICT can offer qualified Consultants who can operate on strategic, tactical, or operational levels. Backed up by the Competence Centre they will help you to solve your specific problems. The ICT Consultants operate preferably in close co-operation with their clients.

### Workshops

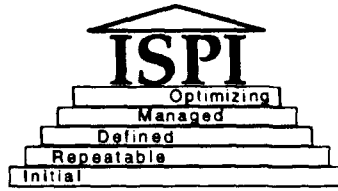
During the assessments areas of attention arise which need improvement. For a number of these areas, ICT has constructed workshops to transfer knowledge, and to improve skills. If desired, such a workshop can be tailored to the specific requirements of a Client.

### Metrics

Product Quality and Features represent value for Customers. One of the many ways to influence this value is to improve software processes. To be able to evaluate these improvements Metric Programmes are initiated. ICT has knowledge and experience in these areas. We can support you during the initiation of your Metrics programme. We apply internationally recognised methods like GQM and AMI.

### ICT Automatisering Eindhoven B.V.

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5613 AM Eindhoven  
Phone +31 (0)40-2440745  
Fax +31 (0)10-2454299  
E-mail [spi@ict.nl](mailto:spi@ict.nl)  
home page <http://www.ict.nl/>



## Institute for Software Process Improvement Inc.

From its original start in Pittsburgh, Pennsylvania five years ago as a spin-off of the SEI's Process Improvement Program, The Institute for Software Process Improvement Inc. (ISPI) has evolved into an international process improvement company that assists organizations in implementing process improvements that support their Business Objectives. ISPI has worked in Europe the past three years and is committed to continue that presence.

ISPI's process improvement consulting services include:

- Process improvement implementation support
- Action planning guidance and support
- Process improvement related training
- Assessments and Evaluations
- Process improvement awareness and expectation setting

ISPI has developed a set of workshops that provide the software engineering background required to support the successful implementation of the Capability Maturity Model Key Process Areas. These workshops include:

- Requirements Engineering
- Software Project Planning
- Software Project Tracking and Oversight
- Software Configuration Management
- Software Quality Assurance
- Establishing a Measurement Program
- Beginning Measurement Program
- Advanced Measurement Program

We have continued to work with many of our long valued customers, i.e., Alcatel, Boeing Co., Eastman Kodak, Siemens, Ericsson, Nokia, Xerox, etc. During this same period of time we are proud to have added some new customers, among these; Ameritech, Citibank International, Citibank Belgium, Lloyds Bank, EDS UK, Diverse Technologies Corp., Eaton Corp., Federal Express, ING Bank, Single Agency Manager (DoD), U.S. Customs Service, UPS, and USDA NFC.

Tim Kasse  
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Institute for Software Process Improvement Inc.  
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Jeff Perdue  
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jrpispi@aol.com

**ISPI WEB Page - <http://www.ibp.com/pit/ispi>**

## **Defining a process is the first step Now, how do you get it used and improved?**

*james martin + co have long been involved with the definition of the most efficient and effective ways of developing IT based systems and in the redefining of business processes. Now businesses face the problem of constantly changing processes as new technology options and competitive pressures bite.*

*What is needed is a consistent definition of a process, and a method to allow the process users, whether they are planners, developers, suppliers or executive management to be able to adapt the processes quickly to their needs.*

### **A R C H I T E C T**



*With ARCHITECT james martin + co have established the process definition and support software that allows precise definition of processes and their fast manipulation.*

*This allows refinement of the process through employee empowerment, continuous improvement and improved communication.*

*Clients such as General Accident, SAS Data, the Dutch PTT, ITT Hartford and Rocky Mountain Health care have seen the benefits of faster planning and measurable improvements in the use of their processes through ARCHITECT*

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(fax)+1 703 352 6699

# ORIGIN

## Origin/Quality Management Competence Center

### **Who are QMCC's clients?**

Origin QMCC's services are focused towards managers of medium-size to large IT service organisations, whether operating independently or as part of a larger company. Our clients are managers who are responsible for the management and operations of the IT organisation. Managers who, under pressure from internal customers and external market forces, are looking for supporting know-how and experience in effectively implementing strategic and measurable quality improvements.

### **How can QMCC be your partner?**

Our clients are involved in the following three main IT processes:

- development of IT solutions for business problems;
- management of IT components needed to implement the solutions;
- management of IT development and maintenance activities.

IT organisations realise that continuous improvement of their main processes is essential to ensure continuity. They are interested in partners that can support them in this with state-of-the-art knowledge and experience. QMCC therefore offers one basic service: improvement of your IT organisation. We provide you with the support you need to make your organisation more professional. To do this effectively, QMCC has concentrated its expertise and skills in the areas that are most relevant to our client's main processes.

QMCC is part of Origin, a multinational IT-service provider with more than 13.500 professionals in 150 business units in 31 countries.

### **Quality Management and Business Management**

The common theme running through the assignments that QMCC is given is: 'Continuous Improvement as an integral part of the business'. The fundamental principle upon which QMCC bases its services is that Quality Management and Business Management are closely bound together. The definition of Total Quality Management that QMCC uses is therefore:

*All activities that an organisation carries out to measure and to continuously improve its performance in the areas of business results, customer satisfaction and personnel satisfaction.*

In our consultancy approach, you will discover how we - together with you - quickly make the results of continuous improvement visible.

This QMCC approach, in summary,

- limits the *duration of the change* by clearly aligning the improvements to the wider strategic goals, by ensuring close co-operation with client's staff and by intensive communication
- limits the *severity of the performance dip* by creating tailor-made solutions that are based on existing service products.

### **Origin Focus-IT**

Focus-IT<sup>®</sup> is QMCC's method for managing improvement processes in which our approach is put into practice. The Focus-IT<sup>®</sup> method provides a well-structured generic framework for managing the different phases of the change process and defines a generic set of improvement activities which QMCC's individual services are designed to support. This generic framework is designed to be tailored to suit specific client situations.

For more information please contact:

Origin/Quality Management Competence Center, Koningin Wilhelminalaan 3, 3527 LA UTRECHT, Postbox 8348,  
3503 RH UTRECHT, The Netherlands  
Tel: +31 (0) 30 291 19 33 Fax: +31 (0) 30 293 03 69 Email: Management.QMCC@nlutqmc.origin.nl

# *The Process Professional Portfolio*

## **The Future in Process Management**

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### *Process Professional Portfolio*

---

A comprehensive range of process management products covering:

- business process modelling and process definition including quality management system implementation
- methods, tools and skill training enabling continuous process improvement
- process assessment methods and tools supporting all applicable ISO standards
- supplier management methods and tools supporting process capability determination and in-contract management

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For further information contact:

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PO Box 12235  
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GREAT BRITAIN  
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Tel: 44 (0)131 331 7851  
Fax: 44 (0)131 331 7860  
Email: [ppp@processpro.com](mailto:ppp@processpro.com)

For more about Process Professional, see:  
<http://www.processpro.com>

## Q-Labs

### Q-Labs

Q-Labs is a leading international professional services company within the Software Engineering industry. We act as change facilitators, providing industry with state-of-the-art solutions designed to keep our customers steps ahead in software engineering. Q-Labs is the link between the research and industrial communities and we are dedicated to State-of-the-Art Mapping between the two communities.

Our market has rapidly expanded since the company was established in 1989. Since then, Q-Labs has helped organisations introduce process improvement strategies which, while reducing cycle time, have increased both quality and productivity. These strategies have been successful for Q-Labs' clients, the majority of which are organisations developing and purchasing large, complex software-intensive systems.

Q-Labs' network of associates includes Prof. Jesse Poore, Dr. Bill Curtis, Prof. Victor Basili, Prof. H. Dieter Rombach, and Prof. Claes Wohlin.

### Q-Labs services

- **Software Process Improvement:** CMM, Experience Factory, IDEAL Life Cycle, Goal-Question-Metric, PSP, SPICE, ami
- **Cleanroom Software Engineering:** Software Specification and Design, Stepwise Refinement, Incremental Development, Functional Verification, Statistical Usage Testing
- **Human Factors:** Team Work, People-CMM, Learning Organisations, Shared Visions, Change Management, Achievement Coaching
- **Architectures and Reuse:** Domain Specific Architectures, Reuse Strategies, Reuse Management, Introducing Reuse, Reuse Process, Reengineering
- **Software Acquisition:** Procurement Process Improvements, Supplier and Project Audits, Product Assessments, Software Certification, Quality Assurance

**Contact us for more information at the E-SEPG meeting point:**

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QSM measures process productivity to provide accurate and reliable software development estimates and control. QSM provides services and management tools that support the key process areas at every level in CMM. They are used worldwide by major corporations, leading software development organisations and government agencies. QSM works with all applications, including real-time embedded, control, telecommunication, engineering, systems software and all commercial software.

QSM operates throughout Europe and North America and the Far East. We hold an international reference database of over 4,000 up-to-date projects. This reference database provides measures on project process productivity, and other significant process, project and quality metrics. Many of today's leading edge software producers contribute data.

QSM's founder, Lawrence H. Putnam, is world renowned as an author, lecturer, and consultant on software process, productivity, quality, estimating, and control. His most popular title is *"Controlling Software Development"* published by the IEEE Computer Society.

QSM methods and tools give managers visibility into the software process. This allows them to improve process, increase quality, reduce costs minimise risk and shorten development time. ("The QSM tools work as advertised. Better quality, productivity and schedule" Rockwell Collins). These benefits apply equally to software developed in-house or developments purchased externally.

QSM conducts benchmark studies, project estimates, bid audits, project health checks and project control services. We assist you to move up the CMM levels and quantify the benefits. We satisfy the CMM requirements in Key Process Areas at every level of maturity. This is accomplished by proven methods and a powerful set of management tools, supported with training. Experienced QSM consultants help you to implement these methods and tools successfully in your organisation so you get major benefits.

**The QSM software products are:**

**SLIM-Estimate** for project estimation, "what if" and risk analysis

**SLIM-Control** for project status assessment and forecasting

**SLIM-Metrics** as a repository and data analysis/benchmarking tool

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**The Software Engineering Institute (SEI) is a federally funded research and development center established in 1984 by Congress with a broad charter to address the transition of software engineering technology. The SEI is located at and operated by Carnegie Mellon University.**



*Hello. I'm Steve Cross, and I'm the Director of the Software Engineering Institute (SEI) at Carnegie Mellon University in Pittsburgh, Pennsylvania.*

*The SEI is in the business of improving software engineering practice. We are a federally funded research and development center sponsored by the U.S. Department of Defense through the Acquisition Program Integration area. We have close to 400 professionals with extensive experience in industry, academia, and government.*

*The SEI technical program is organized into three broad areas: enhanced software management capability, technical engineering practices, and transition readiness.*

*Our overall strategic approach is to address significant software engineering problems - that is, pervasive and important root causes that prevent the timely and cost-effective acquisition, development, enhancement, and use of software-intensive systems.*

*The SEI is focused on technology transition—the actual adoption of improved software engineering practices. We are committed to collaborating with others to produce and field solutions to selected problems. In short, we're here to help our customers to make measured improvements in their software engineering capability.*

*For more than a decade, the government has invested in the software engineering community through the SEI. By working with us, you can benefit from this investment and our experience.*



# SPIN (UK)

Software Process Improvement Network  
a specialist group of the British Computer Society  
(the UK's professional body for IT practitioners and managers)

- A leadership forum for the free and open exchange of software process improvement experiences and practical ideas
- Promoting the practical and beneficial use of software process improvement in achieving higher levels of business performance
- Sustaining commitment and enhancing skills through an active programme of networking, publications, recognition of excellence and mutual support

For details contact SPIN (UK) chairman Ian Seward  
at Oxford Software Engineering Ltd  
Tel +44 (0) 118 978 6222  
Fax +44 (0) 118 977 3562  
e-mail [sewardosel@aol.com](mailto:sewardosel@aol.com)

***The SPIN (UK) stand is sponsored by  
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# Software Productivity Research

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- SPR KnowledgePLAN™ - Powerful Knowledge-based Software Estimation for All Project Managers
- Software Benchmarking and Organizational Assessments
- Support for Process Improvement Programs and Experiments
- Function Point Expertise

---

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**NAME**

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**ADDRESS**

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**FAX**

# Enhance Your Business Performance Through Process



We are in a world of rapid change: Year 2000; Euro; global markets. There is a need to retain competitiveness as well as respond to changes imposed on us by new rules and legislation. TBL's experience in helping leading organisations in Europe implement business focused process improvement initiatives and change their culture has enabled us to evolve a way of linking business performance with process improvement. In software terms this means linking short term business goals with Software Process Improvement (SPI). TBL provides this capability by improving the maturity of software processes that drive competitiveness and change.

## Do You Need to:

- deliver fast and flexible responses to business needs?
- improve the quality and performance of your IT departments and reduce costs?
- change progressively from laggard to leader - and stay ahead?
- get more value for money from smaller and more effective IT resources?
- routinely respond to changes in market demand?

*We can provide practical assistance to help you achieve these aims by providing support for:*

- executive management commitment to process improvement
- management of change
- human resource development
- definition and management of business processes
- measurement and control of progress and performance

With a team of 36 IT professionals around Europe, all recognised experts in their field, TBL is uniquely positioned to assist your IT departments. All TBL people are experienced process coaches/mentors; they have successful track records in process improvement, managing change and implementing projects. A dedication to client success is of prime importance to TBL.

## Year 2000

TBL can help you successfully complete the critically important processes in your Year 2000 and Euro projects. We can provide generic SPI models and help you to implement them in your organisation. Some of the processes we can help you improve are:

**Requirements and Scope Management, Software Configuration and Change Management, Planning, Estimating Scheduling, Project Control, Reviews, Inspections and Testing.**

## Strategic Partnerships

TBL enjoys a close working relationship with the SEI in Pittsburgh, USA, covering a number of joint initiatives in the USA and across Europe.

TBL regularly arranges Executive Management visits to organisations who are recognised leaders in the application of CMM to gain improvements in business performance.

TBL is a founder member of the European Software Process Improvement (ESPI) Foundation. ESPI has an agreement with the SEI to support SEI services in Europe and together they presented the first European SEPG in Amsterdam in 1996. TBL is also the chosen partner of Lloyds TSB Group, the chair organisation of ESPI.

## Key Skills

TBL is able to provide:

- **Process Coaches/Mentors** who act as Role Models to your SEPG and Software Engineers.

TBL Process Coaches/Mentors routinely work at CMM Level 2 and CMM Level 3. They think and act as role models and have a deep understanding of the relationships between the Key Process Areas at CMM Levels 2 and 3. They are able to provide a variety of Step Plans to fast track your organisation to CMM compliance, based on practical experience.

- **Extensive CMM experience** and capability in a wide range of industries.
- **Local support** in UK and across Europe.
- **Support and structure for management of cultural change.**
- **Measurement and metric support**

## TBL

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Heathfield Lane  
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WWW: <http://www.tbl.co.uk>

## **BOOTSTRAP METHODOLOGY**

Since comprehending that software process improvement both reduces costs and improves quality, the growing interest has been focused on software development process and assessment. The challenge to find a suitable methodology that would provide repeatable, comparable and reliable assessment results was undertaken in an ESPRIT project to apply the latest engineering methods to the European software industry in a new and practical manner from which the improvement actions could be taken. The three year research and development project resulted in a new structured methodology that gives an objective assessment of the software organisation and its processes. Inspired by the Capability Maturity Model and aligned with ISO 9000 and the more recent ISO 15504 (SPICE) work, BOOTSTRAP provides an important profile detailing the capability of each major aspect of software development. BOOTSTRAP goes further by providing an action plan for step-by-step evolution to improve both the organisation and the process.

During the BOOTSTRAP project, the overall maturity levels of many software organisations were measured and the results indicated that there was a broad scope for improvement. These opportunities for improvement motivated the establishing of the BOOTSTRAP Institute to manage the assessment method and to help deliver the benefits of process improvement.

## **THE BOOTSTRAP INSTITUTE**

The BOOTSTRAP Institute is a non-profit organisation dedicated to continuous improvement of the BOOTSTRAP Methodology. The development work is founded through membership subscription and the services it provides to its members, licensees, and to industry. The principles of the BOOTSTRAP Institute are:

- The BOOTSTRAP Methodology must be accessible to all interested in improving their software processes and product quality
- The BOOTSTRAP Methodology must grow to encompass new thinking and developments in the software quality arena
- Evolution of BOOTSTRAP must be guided by a democratic, one member, one vote process, ensuring responsiveness and support of users of the BOOTSTRAP Methodology
- The BOOTSTRAP Institute must service the European software industry to improve its competitiveness

## **THE BOOTSTRAP INSTITUTE MEMBERSHIP**

The BOOTSTRAP Institute was established to provide easy access and continuity to the BOOTSTRAP Methodology. Membership benefits apply to organisations and individuals including:

- Organisations interested in improving their internal software quality and productivity
- Consultancies specialising in software process improvement
- Academic institutions wishing to stay at the forefront of developments in software process improvement
- Individuals responsible for conducting assessments

Today, over 100 organisations around the world are using the BOOTSTRAP Methodology in order to assess software processes and improve software development. BOOTSTRAP Methodology can be licensed to both consultancies offering assessments and process improvement services, as well as to software development organisations where in-house BOOTSTRAP assessments can be conducted on a regular basis.

Further information can be obtained from Pasi Kuvaja, The BOOTSTRAP Institute Director. The address is Lentokentäntie 15, FIN-90460 Oulunsalo, Finland. The telephone number is +358-8-5205 399 and fax number is +358-8-5205 395.



# TeraQuest

TeraQuest Metrics, Inc. provides management consulting, process maturity assessments and training for companies that build software-intensive systems. We believe that process maturity ultimately drives profitability. Therefore our mission is to help our clients benefit — via training, metrics and building infrastructure — from lessons learned and from mature software processes. Our multi-level engagement approach ensures the resulting plans and products enable the achievement of our clients' business goals.

TeraQuest's approach to software process improvement (SPI) is based on the Capability Maturity Model for Software (CMM) developed at the Software Engineering Institute (SEI). The CMM is a widely accepted guide for sound software practices, as well as an indicator of an organization's improvement progress. It has been used successfully in both embedded and information systems projects, and the data on the cost benefits of CMM-based improvement programs increasingly demonstrates substantial return on investment.

In recent years, the SEI has expanded the underlying concepts of the CMM to address systems and people related issues. TeraQuest's process maturity assessments, therefore, support three Capability Maturity Models: Software Capability Maturity Model (CMM), People Capability Maturity Model (P-CMM), and Systems Engineering CMM (SE-CMM). TeraQuest offers overview courses on each of the CMMs as well as training in subjects such as project planning and tracking, requirements management, risk and configuration management.

Businesses using our services range from large telecommunication companies to small engineering firms to government agencies. Representative clients include 3M, Bellcore, Bell South Telecommunications, Dell Corp., Eastman Kodak Company, Entergy, Ericsson, FedEx, General Motors, Harris Corp., Liberty Mutual Insurance Company, Lockheed Martin, Microsoft, Motorola, NYNEX Science and Technology, Inc., SEMATECH, and United Defense LP.

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Email: [HYPERLINKmailto:info@teraquest.com](mailto:HYPERLINKmailto:info@teraquest.com)  
[info@teraquest.com](mailto:info@teraquest.com)

The following terms are service marks of the Software Engineering Institute: Capability Maturity Model, CMM, SE-CMM, P-CMM, and IDEAL.



# European SEPG '98

Grand Hotel Krasnapolsky, Amsterdam  
8-11th June 1998

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**DEADLINE FOR PROPOSALS: 28th November 1997**

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## **People - Process - Technology: Hearts and Minds**

*Software Process Improvement in the Context of Year 2000 and the Common Currency*

In Amsterdam this year, the European SEPG is recognised as the leading Software Process Improvement conference in Europe. We will continue to build on this in 1998 with a technical programme focused on the factor that is central to SPI: people. It will demonstrate the experiences, skills and techniques of organisations, teams and individuals that make software process work in the real world. It will also examine the impact of the Year 2000 problem and the introduction of the Euro, on IT in Europe: how has process already helped organisations to reach a solution in a structured, timely way?

Following on from its sister (SEPG) conference to be held in Chicago, U.S.A., the European SEPG'98 will bring together the best of the U.S. event along with the best of the European thinking and experiences in process improvement.

The European SEPG'98 is sponsored by the European Software Process Improvement (ESPI) Foundation, UK, the Software Engineering Institute (SEI), U.S.A. and the European Software Institute (ESI). We are working closely with the European Commission, the Dutch Government and European SPINs to ensure that the event brings together representatives from government, industry and academia for a truly global perspective on software process improvement.

The conference will include plenary sessions, invited and contributed presentations, tutorials, panel discussions, poster sessions and informal birds-of-a-feather (BOF) meetings. There will also be an exhibition of SPI product and services providers.

---

### **Conference theme**

The theme 'People - Process - Technology: Hearts and Minds' will reflect the environment in which we are working in the run up to Year 2000 deadlines. We are interested in receiving submissions for papers on the following topics:

#### **Organisations**

- Process Models: Capability Maturity Model™, Trillium, ISO 9000, SPICE, etc.
- Before and after assessment: the long term view.
- Process improvement and software exports: Eastern Europe, India, Singapore, Latin America, etc.
- Processes for security: addressing security issues concerning networked systems (e.g. Internet, Intranet).
- Process improvement and business objectives: connecting process improvement goals to business objectives.
- Process improvement and the resulting impact on global market competencies.
- Process and mindset: how to create and sustain a successful organisational process culture.

- Software Process Improvement: small and large team experiences.
- People Capability Maturity Model: early results.
- Team processes: inspections, joint application development, joint requirements planning, etc.
- Self-directed and high-performance teams: process discipline.
- Metrics: team goal setting.
- Risk management: institutionalising, managing and practicing.
- Process and mindset: how to create and sustain a successful team process culture.

#### **Individuals**

- Personal Software Process™: case studies.
- Practitioner process improvement: career effects, job satisfaction, etc.
- Metrics: practitioner goal setting.
- Risk management: adopting and adhering.
- Process and mindset: how to create and sustain a successful individual process culture.

---

#### **Presentations**

Presentation sessions are 45 minutes each, which includes time for questions and answers. In particular, we are interested in papers which present practical tools (forms, checklists, procedures, etc.), empirical data (metrics) and actual results of applying software process improvement techniques. Accepted papers will be included in the conference proceedings.

You should submit:

- 1) One-page abstract of the presentation
- 2) 90 word summary for the preliminary programme
- 3) Audience level (beginner, intermediate, advanced)
- 4) Category of presentation (people, process, technology)
- 4) 200 word profile of the presenter

---

#### **Tutorials**

Tutorials are an important part of the SEPG conference. They provide the opportunity for subject area experts to share their expertise with other members of their profession. Tutorials should address the people, process, and technology issues within the conference theme. They should enable participants to apply specific techniques to real-world problems rather than surveying a subject matter on an abstract level.

Full day or half day tutorial proposals should include:

- 1) 1 page abstract, containing an overview of the tutorial and a statement of learning objectives
- 2) 90 word summary for the preliminary program
- 3) Level and orientation of audience (including any assumed prerequisites)
- 4) Category of tutorial (people, process or technology)
- 5) 200 word profile of the presenter

---

#### **Panels**

Panels provide the opportunity for interaction between panellists and the audience. Panels discussing people, process, and technology issues are welcomed. The panel moderator should submit a proposal as follows:

- 1) One page abstract for a 90-minute panel discussion
- 2) The abstract should describe the controversial topic or question to be discussed or debated, give an indication why the subject matter is of significant interest to the community, and provide a list of confirmed or interested participants contacted by the panel moderator -Names, organisations,

- functions and their status (confirmed, interested, not yet contacted)
- 4) Contingency plans (e.g. if key panellists need to drop out)

---

### **Birds-of-a-Feather Sessions**

Birds-of-a-Feather (BOF) sessions are very popular. We anticipate that this year, the number of applications will be higher than the number of opportunities, therefore we urge you to apply well in advance of the conference. BOF sessions are held in the evenings. These may be formal or informal meetings, ranging from discussions in an open forum with no agenda prepared, to position statements. All formats will be considered.

---

### **Suppliers Exhibition**

As Process Improvement becomes more widely adopted throughout Europe, the range of support tools and services are growing rapidly. The suppliers exhibition at the European SEPG demonstrates the increasing experience and capability of organisations that are geared to help ensure success in software process improvement programmes.

Exhibiting with the SEPG is made easy; pre-erected 'Meeting Point' stands are provided, together with a graphics board highlighting your organisation's key messages. Your Meeting Point comes complete with a monitor, so all you have to bring is a laptop computer and your brochures.

The number of Meeting Points will be limited; exhibitors are advised to book early.

---

### **Sponsorship**

A number of sponsorship opportunities will be available at the European SEPG. Please contact us for further details.

---

### **Acceptance Conditions**

Upon acceptance, authors will be mailed specifications for the final submission of camera-ready and electronic-copy format materials to be included in the conference proceedings. Authors will need to sign a copyright release form when they submit their final camera-ready materials. The programme selection committee will include representatives of the three sponsoring organisations.

**DEADLINE FOR PROPOSALS: 28th November 1997**

Please respond to:

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ESPI Foundation  
2 North House  
Milton Keynes UK  
MK1 1SW

Tel: +44 (0)1908 630500  
Fax: +44 (0)1908 630700  
Email: [lornae@espi.co.uk](mailto:lornae@espi.co.uk)

### **PRE-REGISTER YOUR INTEREST**

If you wish to submit a proposal for the European SEPG'98 conference, please advise us as soon as possible, by completing and faxing the form attached.

# European SEPG '98

8-11th June 1998

Grand Hotel Krasnapolsky  
Amsterdam, The Netherlands

(PHOTOCOPY AND FAX THIS PAGE)

## Call For Participation Response

**Fax to:** Lorna Elkington, ESPI Foundation  
**+ 44 (0)1908 630700**

*Please register your interest in participating as soon as possible. The deadline for proposals is **30th November 1997**.*

**Name:**

**Job Title:**

**Company:**

**Address:**

.....  
.....

**Tel:**

**Fax:**

.....

**Email:**

.....

- ☐ I am interested in submitting a proposal for:
- ☐ CONFERENCE PAPER
  - ☐ TUTORIAL
  - ☐ PANEL

**Working Title/Subject area:**

.....

- ☐ My company is interested in exhibiting at the European SEPG '98
- ☐ I am interested in receiving further information on the conference programme

**The European SEPG '98 is a joint venture between the European Software Process Improvement (ESPI) Foundation, UK, the Software Engineering Institute (SEI), U.S.A., and the European Software Institute (ESI), Spain.**

## Index by Presentation Title

A Co-ordinated Approach to Identifying Software Development Risk in MoD Projects	123
A Method for Defining and Improving Software Processes	61
A Quarter Century of Software Process Improvement	117
Appraisals Using the CMM as a Reference Model	25
Approaches to Process Improvement Support	97
Assessment and Optimization of System Architectures: Experiences with Industrial Applications at Siemens	103
Blind Faith is Not the Answer - Establishing a Customer Focused Requirements Process that Consistently Delivers	63
Capability Maturity Model for Software, Version 2.0	87
Challenges and Solutions for SPI in a Small Company	95
Competence in Software and Engineering - Siemens' Software Initiatives	77
Continuous Quality Improvement in Software Development on the Basis of Measurement and Assessment	119
Controlling Outsourced Software Contracts	41
Dealing with the Underworld - Accelerating SPI	33
Dependence to Influence: Developing and Nurturing Effective Sponsorship	55
Effective Implementation of CMM Levels 2 & 3	37
Ethics and the Software Process	83
Experiencing Software Process Improvement at the Sharp End	91
Five Years' Experience with SPI: Lessons Learnt	125
From Chaos to Control	127
Highlights and Report Back from The Measurement Symposium	115
How Competitive is the European Software Industry?	71
IDEAL Approach to Implementing Software Process Improvement	27
Implementing and Enhancing a Quality Management System using TQM Principles and the CMM as a Framework	107
Managing Culture Change	79
Metrics in Small Companies - Coupling a Metrics Programme to Your Business Model	43
Models of SPI: Getting Beyond Case Studies	75
Overcoming Resistance to Change to Become a True 'Learning Organisation'	121
Peer Reviews: The Key to Cost-Effective Quality	29
Personal Software Process	59
Process and Year 2000: Complacency or Hype?	17
Process Improvement Action Planning	65
Process Improvement by Software Measurement - Current and Future Directions for GQM Method	47
Professional Software Development in Europe - A Brief Assessment	73
Project Planning, Tracking and Configuration Management for Project Leaders	67
Quantitative Management of Software Process Improvement	45
Requirements for Winning Software Teams	93
Risk Management in Practice: Effective and Ineffective	57
SEI Process 2000: Building on Strength	109
Setting up SPI in a Multi-Cultural and De-Centralised Engineering Company	85
Software Best Practice: Benefits to the Business	131
Software Measurement Across a Global Enterprise	81
Software Metrics - Real World Experiences	49

INDEX BY PRESENTATION TIME CODE

Software Process Improvement Journey from Level 1 to Level 5	113
Software Process Improvement: Business Impacts and Value	35
SPICE and ISO/IEC 15504	101
The Complementary Aspects of Process Capability and Re-Use Capability	129
The Improvement Engine of the Ericsson Systems Software Initiative	111
The MIAMI Experience	51
The People Capability Maturity Model (P-CMM) - A Brief Introduction	31
Trends in Software Process Maturity	53
Understanding and Improving your Suppliers	105
Using SPI Principles to Improve the Value of Legacy Systems	89